

1 IN THE UNITED STATES DISTRICT COURT  
2 FOR THE EASTERN DISTRICT OF TEXAS  
3 MARSHALL DIVISION  
4 INTELLECTUAL VENTURES I LLC, )(  
5 PLAINTIFF ) ( CIVIL ACTION NO.  
6 VS. ) ( 2:17-CV-577-JRG  
7 ) ( MARSHALL, TEXAS  
8 T-MOBILE USA, INC., T-MOBILE )(  
9 US, INC., ERICSSON INC., AND )(  
10 TELEFONAKTIEBOLAGET LM ) ( FEBRUARY 6, 2019  
11 ERICSSON, ) ( FEBRUARY 6, 2019  
12 DEFENDANTS ) ( 8:30 A.M.

13 | TRANSCRIPT OF JURY TRIAL

14 BEFORE THE HONORABLE JUDGE RODNEY GILSTRAP

15 | UNITED STATES CHIEF DISTRICT JUDGE

## 16 APPEARANCES:

17 FOR THE PLAINTIFF: Mr. T. John Ward, Jr.  
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19 Ms. Andrea L. Fair  
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21 COURT REPORTER: Ms. Shelly Holmes, CSR, TCRR  
Official Reporter  
22 United States District Court  
Eastern District of Texas  
23 Marshall Division  
100 E. Houston Street  
24 Marshall, Texas 75670

25 (Proceedings recorded by mechanical stenography, transcript produced on a CAT system.)

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## 1 P R O C E E D I N G S

2 (Jury out.)

3 COURT SECURITY OFFICER: All rise.

4 THE COURT: All right. All right. Are the  
5 parties prepared to read into the record those items from  
6 the list of pre-admitted exhibits used during yesterday's  
7 portion of the trial?

8 MS. HENRY: We are, Your Honor.

9 THE COURT: All right. Why don't you start,  
10 Ms. Henry, for Plaintiff.11 MS. HENRY: Plaintiffs read into the record  
12 DX-529, PTX-42, PTX-52 through 57, PTX-328, PTX-347,  
13 PTX-352, PTX-366 through 370, PTX-896, PTX-997, PTX-1009,  
14 PTX-1019, PTX-1087, PX-1326 through 1328, PTX-1362,  
15 PTX-1371, PTX-1384, PTX-1395, PTX-1464, DX-536, PTX-44,  
16 PTX-261, PTX-335, PTX-349, PTX-356, PTX-372, PTX-916,  
17 PTX-1000, PTX-1013, PTX-1024 through 1025, PTX-1114,  
18 PTX-1346, PTX-1366, PTX-1376, PTX-1387, PTX-1396, PTX-1466,  
19 PTX-1 through PTX-3, PTX-48 through PTX-50, PTX-324,  
20 PTX-342, PTX-351, PTX-358 through 364, PTX-868 through 893,  
21 PTX-924 through 931, PTX-1003, PTX-1017, PTX-1076,  
22 PTX-1132, PTX-1352, PTX-1367, PTX-1377, PTX-1391, PTX-1401,  
23 and PTX-58.24 THE COURT: All right. Do Defendants have any  
25 objection to that rendition?

1 MS. SMITH: No, Your Honor.

2 THE COURT: Do Defendants have a similar offer to  
3 make?

4 MS. SMITH: We do, Your Honor.

5 THE COURT: Please proceed, Ms. Smith.

6 MS. SMITH: We offer Defendants' 405, DX-405,  
7 DX-520, DX-529, DX-533, DX-536, DX-537, and DX-560.

8 THE COURT: All right.

9 MS. HENRY: Your Honor, may we make a quick check?  
10 There were two that I wasn't aware of that I would like to  
11 confer with co-counsel --

12 THE COURT: All right.

13 MS. HENRY: -- to make sure we don't have  
14 objections.

15 THE COURT: Are there any objections from  
16 Plaintiff?

17 MS. HENRY: No, Your Honor.

18 THE COURT: Okay. Before I bring the jury in and  
19 we proceed with Plaintiff's next witness, I understand,  
20 Mr. Kubehl, that you are interested in using a whiteboard  
21 as a demonstrative with a witness.

22 Can you tell me what you have in mind? I'd much  
23 rather get the details worked out now than when the jury is  
24 in the box.

25 MR. KUBEHL: Thank you, Your Honor.

1                   What we've got with Mr. Skarby, we've got poster  
2 boards -- a couple of poster boards that he wanted to be  
3 able to point some things out and help the jury understand  
4 what he was talking about.

5                   And so I wanted to approach, Your Honor, to see  
6 what the best placement of the easel might be so that we  
7 could put the poster board on that and allow him to do  
8 that.

9                   THE COURT: Okay. Is he going to be drawing or  
10 writing on these or just pointing to what's already there?

11                  MR. KUBEHL: He'll be pointing. Dr. -- Dr. Wicker  
12 had just a plain white whiteboard that he wanted to do some  
13 drawing on later, but Skarby will only be pointing.

14                  THE COURT: Well, the Court has a laser pointer  
15 that he can use from the witness stand --

16                  MR. KUBEHL: Okay.

17                  THE COURT: -- which I'd rather do than have  
18 people up and around walking. If -- if that becomes  
19 necessary -- as a matter of fact, I'll put it -- I'll put  
20 it on the -- I'll put it on the witness stand.

21                  And if you'll just be sure that from wherever you  
22 put the board and wherever he's seated, he's got a straight  
23 line that he can use that point.

24                  Will that work?

25                  MR. KUBEHL: That will work.

1                   And then with Dr. Wicker, to the extent he needs  
2 to do any drawing, would that be --

3                   THE COURT: Well, to the extent he needs to do  
4 some drawing, he's going to obviously have to get out of  
5 his seat on the witness stand and move to wherever the  
6 board is.

7                   We're not going to -- I don't think we can set it  
8 up next to the witness stand. And certainly it's going to  
9 have to be positioned so opposing counsel and the Court  
10 preferably have an idea of what's going to be put on it.

11                  I have allowed -- with some hesitancy in the past,  
12 but I have allowed a board to be placed just on this side  
13 of that partition and allow the witness to come down as far  
14 as necessary to mark on that board.

15                  The problem is, even though they're close to the  
16 jury, you end up with the witness facing the board when  
17 they're talking, and we end up having a handheld microphone  
18 to be used, and then we've got a witness with one hand with  
19 a microphone and one hand on a marker. It can get -- it  
20 can get out of hand if it's not done carefully and  
21 professionally.

22                  But I'm -- I'm open to that possibility if -- if  
23 your intention is to use a demonstrative with Dr. Wicker on  
24 which you'll want him to make marks or drawings.

25                  MR. KUBEHL: Thank you, Your Honor.

1                   THE COURT: Now, that will be a board -- I mean,  
2 that will be a poster or something? We're not talking  
3 about a whiteboard or --

4                   MR. KUBEHL: No. We're just talking about that  
5 poster board, which is just white, and he would just draw  
6 on that with permanent marker.

7                   THE COURT: All right. That's fine. The problem  
8 with whiteboards are what the witness marks sometimes get  
9 erased, and then the other side can't see them to  
10 cross-examine. So as long as what is put on there stays on  
11 there, we'll try to work through it on that basis.

12                  MR. KUBEHL: Thank you, Your Honor.

13                  THE COURT: Okay. Mr. Black?

14                  MR. BLACK: Well, I just want to make sure we have  
15 all these protections in place to make sure that the  
16 demonstratives are things that are in the actual expert  
17 report, and I don't know --

18                  THE COURT: Well --

19                  MR. KUBEHL: I don't think it's going to be  
20 controversial, Your Honor. It's background that's in his  
21 report.

22                  MR. BLACK: It might be fine. I just don't  
23 know -- I did have one trial in this courtroom where  
24 someone drew a piece of prior art on the board and told the  
25 Federal Circuit it was invalidating. The Federal Circuit

1 didn't like that during argument because it wasn't in  
2 evidence.

3                   But the problem with someone drawing a  
4 demonstrative is why for one thing. It's not being  
5 disclosed to us ahead of the examination.

6                   THE COURT: Well, demonstratives are supposed to  
7 be -- now, obviously, you can't disclose a hard copy of  
8 what a witness might draw in realtime.

9                   MR. BLACK: Yes, Your Honor.

10                  THE COURT: But you can -- you can disclose what  
11 you anticipate the witness is going to do. You can  
12 identify it. Has that happened here?

13                  MR. KUBEHL: Well, certainly --

14                  THE COURT: Do the Plaintiffs know what you intend  
15 to do with Dr. Wicker as far as the white -- or as far as  
16 the poster board is concerned?

17                  MR. KUBEHL: We have not had that discussion.

18                  THE COURT: Well, you need to have that discussion  
19 before Dr. Wicker takes the stand.

20                  MR. KUBEHL: Absolutely.

21                  THE COURT: Okay. Ms. Fair, are you cold this  
22 morning? I see you wrapped in a blanket.

23                  MS. FAIR: Yes, Your Honor. I am cold.

24                  THE COURT: I will have to admit that temperature  
25 is in the purview of the general services administration,

1 and it's set in Tyler, not in Marshall, and there's not  
2 much I can do about it.

3 MS. FAIR: Yes, Your Honor. I know you can't.

4 THE COURT: But I can't have counsel wrapped in  
5 blankets at counsel table.

6 MS. FAIR: Yes, Your Honor.

7 THE COURT: Okay. The jury may get jealous.

8 All right.

9 MS. SMITH: Your Honor?

10 THE COURT: Yes, Ms. Smith.

11 MS. SMITH: Excuse me, Your Honor.

12 With the Court's permission, the second witness  
13 today is Mr. Johan Norrby. We would like to allow  
14 Mr. Norrby to utilize the base station that you saw earlier  
15 in opening statement over here in the corner, the white  
16 piece of equipment, during his testimony.

17 I just wanted to ask the Court if possibly prior  
18 to the time he takes the stand, if I could put it on the  
19 table in front of Your Honor and then ask the court  
20 personnel to help me kind of --

21 THE COURT: These were the items that were placed  
22 here during either voir dire or opening?

23 MS. SMITH: Yes, Your Honor.

24 And then ask the court personnel to perhaps hand  
25 it to Mr. Norrby. It's something that's manageable enough

1 that he can work with it on the stand.

2 THE COURT: I assume it's not something with  
3 excessive weight to it, something that can easily be  
4 carried?

5 MS. SMITH: Not for me.

6 THE WITNESS: It's easy to be carried.

7 MS. SMITH: It's pretty light, Your Honor, yeah.

8 THE COURT: Okay. It's easy for -- it's easy to  
9 be carried.

10 MS. SMITH: Yes, Your Honor.

11 THE COURT: Well, why don't you just position them  
12 at counsel table, and then when the witness is on the  
13 stand, if you want to ask leave to approach with that, then  
14 you can walk it over, hand it to the Court Security  
15 Officer, and he'll give it to the witness.

16 MS. SMITH: I'll do it, Your Honor. Thank you.

17 THE COURT: Okay. Is there anything else of a  
18 similar nature we need to address before I bring in the  
19 jury?

20 All right. Mr. Johnston, bring in the jury,  
21 please.

22 COURT SECURITY OFFICER: All rise.

23 (Jury in.)

24 THE COURT: Good morning, ladies and gentlemen.  
25 Welcome back. Please have a seat.

1 Plaintiff, call your next witness.

2 MR. WARD: Your Honor, the Plaintiff calls  
3 T-Mobile's corporate representative, Mr. Stephen McGrath.

4 THE COURT: All right. Mr. McGrath, if you'll  
5 come forward and be sworn, please.

6 (Witness sworn.)

7 THE COURT: Please come around, sir, and have a  
8 seat on the witness stand.

9                   All right. Mr. Ward, you may proceed with your  
10 direct examination.

11 MR. WARD: Thank you, Your Honor.

12 STEPHEN MCGRATH, PLAINTIFF'S WITNESS, SWORN

DIRECT EXAMINATION

14 BY MR. WARD:

15 Q. Good morning.

## 16 A. Good morning.

17 Q. Would you please introduce yourself to the jury?

18 A. My name is Stephen McGrath. I'm principal corporate  
19 counsel at T-Mobile.

20 Q. And, Mr. McGrath, you and I met this morning for the  
21 first time; is that correct?

22 A. We did.

23 Q. We've been seeing each other in the courtroom, but I  
24 introduced myself to you this morning and let you know that  
25 I'd be questioning you.

1 A. That's correct.

2 Q. Now, you said you're senior corporate counsel at  
3 T-Mobile; is that correct?

4 A. Principal corporate counsel is actually my title.

5 Q. Principal.

6 And so you're an attorney.

7 A. That's correct.

8 Q. And a licensed attorney?

9 A. Yes.

10 Q. And how long have you been practicing law?

11 A. I have been practicing law about 25 years.

12 Q. And you're here -- T-Mobile selected you to be here to  
13 monitor what's going on in the trial and speak on behalf of  
14 the company, if necessary.

15 A. That's correct.

16 Q. Where did you grow up?

17 A. I grew up in Seattle, Washington.

18 Q. And when you were growing up, if you made a mess, were  
19 you taught that you cleaned up your own mess?

20 A. Yes.

21 Q. You were present during the cross-examination of  
22 Dr. Jorgensen, were you not?

23 A. I -- I was, yes.

24 Q. And Mr. Kubehl is the attorney representing not just  
25 Ericsson, but he also represents T-Mobile, correct?

1 A. That's correct.

2 Q. And did you hear Mr. Kubehl ask Dr. Jorgensen if he was  
3 lying?

4 A. I don't recall that testimony specifically.

5 Q. All right.

6 MR. WARD: Your Honor, can I approach the witness  
7 and hand him a transcript of that testimony and let him  
8 refresh his recollection?

9 THE COURT: You may approach.

10 THE WITNESS: Thank you.

11 Q. (By Mr. Ward) Now, the testimony is there on Page 126.  
12 You can read Lines 10 down through 25.

13 A. I see the testimony you're referring to.

14 Q. Am I correct, he asked Dr. Jorgensen if he was lying.  
15 Do you see that?

16 A. He said -- yes. He said: So you were lying to IV when  
17 you said that, or did they make it up in the document, or  
18 is there some other explanation?

19 Q. Right. And then there was an objection that got  
20 sustained, and Mr. Kubehl apologized to the Court, correct?

21 A. That's correct.

22 Q. Did -- did he ever apologize to Dr. Jorgensen?

23 A. I have no idea.

24 Q. Well, have you heard him apologize to Dr. Jorgensen?

25 A. I have not.

1 Q. You've been practicing law for 25 years. You been in  
2 courtrooms?

3 A. Yes, I have.

4 Q. Have you seen lawyers ask witnesses if they're lying on  
5 the stand in open court in those 25 years?

6 A. Yes.

7 Q. That's something you see?

8 A. From time to time.

9 Q. You understand that the members of our jury are the  
10 ones who are going to determine the credibility of the  
11 witnesses in this case, correct?

12 A. I do, yes.

13 Q. Solely their job?

14 A. That's correct.

15 Q. Not the lawyers' job to tell them who is lying and  
16 telling the truth, is it?

17 A. Yes. That is the jury's job.

18 Q. Let's talk about what brought that about.

19 You remember there was some questions about  
20 Dr. Jorgensen being paid as a consultant for IV, \$300.00 an  
21 hour.

22 A. Yes.

23 Q. Do you recall that?

24 A. I remember the questions. Well, not all the questions.  
25 I remember the line.

1 Q. Are you down here for free, or are you being paid by  
2 T-Mobile?

3 A. I work at T-Mobile, so this is part of my ordinary job.

4 Q. Part of your job?

5 A. I'm being paid.

6 Q. They pay for your plane tickets to get here?

7 A. Yes.

8 Q. Paying for your hotel, lodging, meals?

9 A. Yes, they are.

10 Q. All the lawyers sitting at these tables, you think  
11 they're being paid for their time?

12 A. Yes, they are.

13 Q. Are the expert witnesses in this case being paid for  
14 their time?

15 A. I would assume they are, yes.

16 MR. WARD: May I have the ELMO, Ms. Lockhart?

17 Q. (By Mr. Ward) So Dr. Jorgensen is being paid \$300.00  
18 an hour. We learned that Dr. Chrissan is being paid  
19 \$225.00 an hour. Do you recall that?

20 A. Yes.

21 Q. And they didn't ask Dr. Williams. I'll tell you, he's  
22 being paid by the hour. And we'll find out what Dr. Wicker  
23 and Dr. Acampora are being paid by the hour during their  
24 testimony, won't we?

25 A. I would assume you might ask that question.

1 Q. To the extent the jury finds it's relevant?

2 A. Right.

3 Q. Nothing unusual about any of that, is there?

4 A. There's nothing unusual about experts and lawyers being  
5 paid.

6 Q. Well, what about an inventor, such as Dr. Jorgensen,  
7 being compensated for his time?

8 A. I'd say that really depends, from case-to-case.

9 Q. You worked at Microsoft as a lawyer, didn't you?

10 A. Yes, for 14 years.

11 Q. And during those 14 years that you worked at Microsoft,  
12 did you ever have to pay inventors for the time that they  
13 might spend consulting with Microsoft inside counsel or  
14 outside counsel about their inventions?

15 A. I don't recall specifically. But that may have  
16 occurred.

17 Q. You think if you had an inventor come to trial, a  
18 gentleman with a degree in physics, a medical -- a medical  
19 degree, a gentleman who practiced as a surgeon, who had  
20 started up private businesses going public, over 30 years  
21 of experience, that you might need to pay him for his time?

22 A. Yes, it's possible that it would make sense to  
23 compensate somebody for their time.

24 Q. It's possible, or it's probable?

25 A. Well, it's -- it's probable, I guess. The question is

1 just how much and what -- what their time is worth, all  
2 that sort of stuff. I can't really speak to that.

3 Q. And are you telling the jury that you think \$300.00 an  
4 hour for Dr. Jorgensen time -- Dr. Jorgensen's time sounds  
5 unreasonable?

6 A. No, I'm not telling the jury that. I -- I really don't  
7 know enough about the underlying facts.

8 Q. All right. Thank you.

9 MR. WARD: I'm through with that, Ms. Lockhart.

10 Q. (By Mr. Ward) Now, I assume that this case is  
11 important to T-Mobile?

12 A. Yes, it is.

13 Q. And that's why they sent you here as the corporate  
14 representative?

15 A. That's correct.

16 Q. So that they have a representative at trial?

17 A. That's correct.

18 Q. You've been monitoring this case during its pendency?

19 A. I have been monitoring this case since the day it came  
20 in.

21 Q. All right. And so they would send someone here who's  
22 knowledgeable about the facts of the case and who could  
23 assist the jury with answering the questions they've got to  
24 answer?

25 A. That's correct.

1 Q. And you're that guy?

2 A. I'm that guy.

3 Q. What's a Rule 26 disclosure, Mr. McGrath?

4 A. Well, it's a -- a process where the parties exchange  
5 information about who the sort of relevant people and  
6 information might be in the case.

7 Q. And do you have a responsibility for reviewing that  
8 after it's drafted and -- and disclosed, or before it's  
9 disclosed?

10 A. Yes, I review documents of that nature on my cases.

11 Q. Okay. And so you know that T-Mobile served initial  
12 disclosures on Intellectual Ventures in this case, don't  
13 you?

14 A. Yes.

15 Q. And in that document, T-Mobile's got to identify the  
16 name, address, and telephone number of persons having  
17 knowledge of relevant facts, a brief statement of each  
18 identified person's connection with the case, and a brief  
19 fair summary of the substance of the information known by  
20 such persons, right?

21 A. That's correct.

22 Q. Your name is not in there, is it?

23 A. I don't recall, but I would assume the answer is no.

24 Q. Would you like to review it?

25 A. No, that's -- that's fine.

1 Q. So you know your name is not in there, don't you?

2 A. Well, I -- I doubt it is, but I don't recall for sure.

3 MR. WARD: All right. May I approach the witness,

4 Your Honor?

5 THE COURT: You may approach.

6 Q. (By Mr. Ward) Can you confirm that you're not  
7 disclosed as an individual with knowledge of relevant  
8 facts?

9 A. My -- my name is not on the list.

10 Q. There's only two names of T-Mobile employees on that  
11 list, are there not?

12 A. I think -- that's correct.

13 Q. All right. And there might have been some sub --  
14 subsequent amendments, but you'd agree with me that you've  
15 never been disclosed as an individual with knowledge --  
16 knowledge of relevant facts, have you?

17 A. I haven't been dis -- disclosed in this process.

18 I think I've been disclosed as the corporate representative  
19 for purposes of the trial.

20 Q. I agree, you have been. We knew you were going to be  
21 the witness here.

22 But during the discovery of this case, you were  
23 never disclosed as -- as an individual with knowledge of  
24 relevant facts, were you, sir?

25 A. That's correct.

1 Q. And you know why that happens during discovery, don't  
2 you?

3 A. Yes, I do.

4 Q. That's -- that's so that the attorneys have an  
5 opportunity to go sit down and talk to the folks that they  
6 want to and ask them what they know about the case?

7 A. That's correct.

8 Q. You were present for opening statements, obviously,  
9 weren't you, sir?

10 A. Yes, I was. I've been here during the entire trial.

11 Q. And do you recall Mr. Kubehl, during his opening, maybe  
12 being a little critical of me for not discussing Ericsson  
13 enough in my opening?

14 A. I recall some form of that, yes.

15 Q. That we refused to acknowledge Ericsson, that this was  
16 Ericsson's product, not T-Mobile's product, the base  
17 station?

18 A. Again, yes, some form of that.

19 Q. And you know enough about patents to know that there  
20 are apparatus claims, and there are method claims, correct?

21 A. Yes.

22 Q. And this case involves a method claim, does it not?

23 A. It involves method claims, yes.

24 Q. Method claims, correct.

25 And he told the jury that Ericsson was here to

1 stand behind its product?

2 A. I believe that's correct, yes.

3 Q. And that T-Mobile's just the innocent customer here,  
4 right? Y'all are just using a product manufactured by  
5 somebody else?

6 A. Again, I don't recall the exact words, but probably  
7 some form of that, yes.

8 Q. Something like that?

9 A. Right.

10 Q. But it's T-Mobile who chooses how it configures its  
11 network, correct?

12 A. We choose the configuration settings for the network,  
13 yes.

14 Q. Ericsson didn't decide that T-Mobile should activate  
15 VoLTE, did it?

16 A. Ericsson did not decide -- that's correct.

17 Q. That was a -- that was a T-Mobile decision, correct?

18 A. Yes, we decided to enable VoLTE in our network.

19 Q. And that's because you all saw advantages to doing  
20 that, correct?

21 A. That's correct.

22 Q. And one of the advantages to doing that was that you  
23 were able to save spectrum?

24 A. That's one of the benefits of -- of using VoLTE for us.

25 Q. And you heard me represent to the jury during opening

1 statement that spectrum costs billions and billions of  
2 dollars. Did you hear me say that?

3 A. I did.

4 Q. And was I dead accurate about that?

5 A. Yeah, spectrum is very expensive. It really depends on  
6 the -- on what you're buying, how much, and all that, but  
7 it's expensive stuff.

8 Q. And -- and T-Mobile spends billions of dollars to  
9 acquire it, doesn't it?

10 A. Yes.

11 Q. It's a limited resource, isn't it?

12 A. It is.

13 Q. And then T-Mobile charges its subscribers on a  
14 monthly basis for the services it provides?

15 A. That -- that's correct.

16 Q. Now, you were present during Mr. Bratic's testimony  
17 yesterday?

18 A. I was, yes.

19 Q. And you recall there was some questions about what the  
20 damages would be if he used his infrastructure analysis?

21 A. Yes, I do.

22 Q. Difference from 77 million to 9 million.

23 A. Yes.

24 Q. Roughly.

25 A. Something around --

1 Q. In that ballpark.

2 A. Yes.

3 Q. Isn't that why you all want to make this case about  
4 Ericsson; because if you were to just look at the -- if  
5 Ericsson was the only party and we were just looking at  
6 base stations, that damages would be much lower?

7 A. I don't think that's why we want to make it about base  
8 stations, but we do believe that that's the appropriate  
9 measure of damages.

10 Q. And when you say we believe, you mean T-Mobile and  
11 Ericsson.

12 A. That's correct.

13 Q. But there's something else going on between T-Mobile  
14 and Ericsson that we haven't talked about at all during  
15 this case, isn't there?

16 A. I'm not sure what you're referring to specifically.

17 Q. You're an attorney, right? What is indemnity?

18 A. Indemnity is when -- well, it can be complicated, but  
19 in a situation like this, it's when you purchase  
20 somebody -- or something from somebody, a supplier in this  
21 instance, and they agree to -- to back up their product,  
22 the product that you bought from them.

23 Q. And -- and that's going on here, isn't it?

24 A. Yes. Ericsson has -- has come here to defend its  
25 products.

1 Q. And indemnity means security or protection against a  
2 loss or further financial burden. Does that sound like a  
3 reasonable definition?

4 A. Yes.

5 Q. And in this case, it means Ericsson's paying the  
6 attorneys' fees for T-Mobile, correct?

7 A. Some of them, yes.

8 Q. For Baker Botts. They're -- they've got that tab,  
9 right?

10 A. That's correct.

11 Q. And Baker Botts represents both Ericsson and T-Mobile?

12 A. That's correct.

13 Q. And so Ericsson really wants this case to be about base  
14 stations and not about T-Mobile's network, don't they?

15 A. Ericsson believes this case is about base stations, and  
16 so does T-Mobile.

17 Q. They've got about 77 million reasons to make it about  
18 their base stations and not about T-Mobile's network, don't  
19 they?

20 A. I -- I believe that we're here because we believe we  
21 don't infringe these patents, as opposed to all the  
22 indemnity issues and things like that.

23 Q. And you're the only fact witness from T-Mobile who's  
24 coming to testify, right?

25 A. I'm the only fact witness who's here to testify live.

1 We've seen some of our engineers already by video  
2 deposition -- or video testimony. I'm sorry.

3 Q. Right. A fact witness not disclosed as an individual  
4 with knowledge of relevant facts during the discovery  
5 period in this case. That's who T-Mobile chose to send,  
6 right?

7 A. I am not only person that fits in that category, yes.

8 Q. Right. You're the only person that fits in the  
9 category of someone with knowledge of relevant facts who  
10 wasn't disclosed during the discovery period?

11 A. No. I -- oh, I'm sorry. No. I meant the description  
12 that you provided about not being disclosed.

13 Q. Okay.

14 A. I think our other witnesses are mostly on this list.

15 Q. But they're not coming to answer questions, right?

16 A. Not live.

17 Q. T-Mobile chose to send you.

18 A. That's correct.

19 Q. When you worked at Microsoft, did you ever have  
20 occasion to license or take a license from an inventor  
21 outside of Microsoft on behalf of Microsoft?

22 A. You mean -- I'm sorry. Could you repeat the question?

23 Q. Yeah. That was a bad question.

24 Did you ever negotiate a license on behalf of  
25 Microsoft where Microsoft was a licensee?

1 A. Yes. Yes, I have.

2 Q. That was something within your job duties, was it not?

3 A. That's correct.

4 Q. And when an individual, an inventor, or a company with  
5 patents would approach Microsoft, would it present claim  
6 charts to it?

7 A. Occasionally.

8 Q. Occasionally?

9 A. Sometimes yes; sometimes no.

10 Q. Okay. And would you ever reach deals outside of  
11 litigation where you did take a license on behalf of  
12 Microsoft?

13 A. That -- occasionally, yes.

14 Q. And when you made those deals, did Microsoft ever say,  
15 you know what, we're going to make this deal, and we're  
16 going to put in writing that these patents are valid, and  
17 they're infringed?

18 A. I -- I don't recall specifically. I know that wouldn't  
19 have been our normal practice.

20 Q. That's unusual, correct?

21 A. I would -- I would say so for us.

22 Q. Right. In the real world, that typically doesn't  
23 happen in licensing negotiations, does it, Mr. McGrath?

24 A. Again, my experience at Microsoft?

25 Q. Yes.

1 A. No, I can't say.

2 Q. Okay. In any event, when you negotiate a license,  
3 would you just take a license to whatever you were  
4 presented with, or would you ask for a license to  
5 everything that the individual or company had?

6 A. Are you -- are we still talking about Microsoft?

7 Q. Yes, sir.

8 A. Okay. We would -- our practice at Microsoft was to  
9 essentially do one deal one time and not have to, you know,  
10 do kind of onesy/twosy licensing. So it would be our  
11 normal portfolio nature.

12 Q. Even if you were only presented with one or two, you'd  
13 get a license to everything, wouldn't you?

14 A. If we thought that was warranted, yes.

15 Q. Because, if you didn't, they might be knocking at your  
16 door again in a year or two when you released another  
17 product that they thought might be covered by another  
18 patent, right?

19 A. That's correct.

20 Q. And you might be get a phone call from your boss  
21 saying, why didn't you get a license to the entire  
22 portfolio?

23 A. Could be.

24 Q. That's why you get a license to the portfolio, right?

25 A. Right. The -- the point would be to -- I would refer

1 to it sort of loosely as one and done.

2 Q. And you know that these cases are very expensive, don't  
3 you?

4 A. Yes, they certainly can be.

5 Q. They take juries away from their families.

6 A. That's correct.

7 Q. They take up judicial resources.

8 A. That's correct.

9 Q. And they cost a lot of money for both sides, don't  
10 they?

11 A. That is correct.

12 MR. WARD: Mr. Horseman, could we look at  
13 Plaintiff's Exhibit 1376?

14 Q. (By Mr. Ward) Have you ever seen this document before,  
15 Mr. McGrath?

16 A. I have probably seen some version of it, yes, I would  
17 assume so.

18 Q. All right. And that's a T-Mobile document. It says:  
19 Ericsson RAND, UMTS, and LTE Advanced Branded QoS Evolution  
20 Lab Validation Report.

21 Do you see that?

22 A. Correct.

23 MR. WARD: And, Mr. Horseman, can we zoom in on  
24 that little graph that has the date?

25 Q. (By Mr. Ward) It looks like it was initiated and

1 revised, same date, May 21, 2014.

2 Do you see that?

3 A. Yes, I do.

4 MR. WARD: Can you go to the next page, please,  
5 Mr. Horseman? And let's look at the revision history at  
6 the bottom.

7 Q. (By Mr. Ward) Do you know Mr. Mark Kilimov?

8 A. I do not.

9 Q. Okay.

10 MR. WARD: Let's go do Page 4 of that document,  
11 Mr. Horseman. And we'll zoom in on the top half --  
12 perfect.

13 Q. (By Mr. Ward) And you see where it's talking about the  
14 purpose of this document is validating a request that's  
15 part of AAV QoS Evolution validations?

16 A. I see those words, yes.

17 Q. And do you know what the -- this document is -- is  
18 directed at, just from looking at it?

19 A. At a very high level, yes.

20 Q. Can you tell us at a high level what it's directed at?

21 A. Well, I think it's -- it's talking about various, you  
22 know, QoS specifications, parameters.

23 There's lots of different ways to refer to them,  
24 but it appears to be an internal engineering document at  
25 T-Mobile.

1 Q. Okay. And -- and it's talking about three additional  
2 queues being assigned. It's got T-Mobile user traffic and  
3 enterprise user traffic. Do you see that first bullet  
4 point?

5 A. Yes.

6 Q. And it says map with QCI 6?

7 A. Yes.

8 Q. And is -- is that -- is QCI 6 one of these levels in  
9 the quality of service ranking?

10 A. Yes.

11 Q. All right. And then it's got second brand users get  
12 mapped with a QCI of 7. Do you see that?

13 A. Yes.

14 Q. And second brand users, examples are MetroPCS, Simple,  
15 and then Walmart, Straight Talk, et cetera. Do you see  
16 that?

17 A. Yes.

18 Q. MetroPCS, that's a company that T-Mobile owns, correct?

19 A. That's correct.

20 Q. And they're getting a -- this quality of service of 7,  
21 a lower level than T-Mobile users, according this document?

22 A. According to this document.

23 Q. And then we've got inbound roamers with a level of 8,  
24 and then network extreme user traffic gets a level of 9.  
25 Do you see that?

1 A. I do.

2 Q. And what do you -- what are network extreme users?

3 A. I don't recall the exact definition, but I think we  
4 heard a little bit about that, perhaps yesterday, about  
5 people who are consuming a -- a huge amount of data or --  
6 or just traffic generally on their phone.

7 Q. They're using a lot of data?

8 A. A lot more than an ordinary person.

9 Q. And is the -- the deal with T-Mobile unlimited data and  
10 voice calls for monthly subscribers?

11 A. Yes, that's certainly -- it all depends on the plan,  
12 but that's certainly the majority of our plans nowadays.

13 Q. That's kind of part of being the un-carrier, right?  
14 You're unlike Verizon and AT&T. Y'all give unlimited text  
15 and talking, right?

16 A. That's right. Again, it depends on the plan.  
17 I don't -- I don't know the specifics.

18 Q. Well, when you sell those plans, do you tell the folks  
19 that are buying them it's not really unlimited because if  
20 you use it a lot, we're going to slow you down?

21 A. I -- I really don't know what the disclosures are  
22 there, but -- and, so I'm not sure. But, in general, it's  
23 unlimited data, unlimited voice.

24 Q. But if you use it a lot, we're going to move you to the  
25 end of the line?

1 A. If you -- if you're an extreme user, it appears that's  
2 how it was set up, at least as of this document.

3 MR. WARD: And go to Page 5, please, Mr. Horseman,  
4 and zoom in on "certain benefits will be added."

5 Q. (By Mr. Ward) And so this document, it's talking about  
6 benefits from using these different levels of quality of  
7 service, correct?

8 A. It -- that appears to be the case.

9 Q. And one of which we just discussed is the protection of  
10 user experience from network abusers, right?

11 A. Correct. I think that's the extreme user scenario,  
12 perhaps.

13 Q. And then right below it, it says: Gains in build ahead  
14 for spectrum exhaustion.

15 Did I read that correctly?

16 A. Yes, you did.

17 Q. And that spectrum is what we were talking about that  
18 costs billions of dollars, right?

19 A. Yeah, I think that's the same spectrum you were talking  
20 about, in general.

21 MR. WARD: Thank you, Mr. Horseman. Let's look at  
22 1395.

23 Q. (By Mr. Ward) And the jury saw this document yesterday  
24 during the testimony of Mr. Baker. Do you recall that?

25 A. I do.

1 Q. And I'm not going to harp on it, but --

2 MR. WARD: Let's go to Page 6.

3 Q. (By Mr. Ward) They saw this in opening, and they saw  
4 it during the deposition, as well, these comments at the  
5 bottom of the document about the un-carrier is our response  
6 to a stupid, broken, and arrogant industry. You recall  
7 that testimony?

8 A. Yes.

9 Q. And you recall Mr. Baker saying that that wasn't just  
10 his -- those -- those weren't his words, that's Mr. John  
11 Legere who has said that publicly, has he not?

12 A. I'm -- I'm sure he has, yes. I don't know recall  
13 exactly what Mr. Baker said, whether it was John Legere or  
14 somebody else, but, yes.

15 Q. Mr. Legere has a Twitter account, he's on YouTube, and  
16 he's said that a number of times, has he not?

17 A. That's correct.

18 Q. And talking about how T-Mobile is changing the rules  
19 and breaking the -- the status quo?

20 A. Yes.

21 Q. And he also refers to Verizon and AT&T as the dumb and  
22 dumber of the industry, doesn't he?

23 A. I'm -- John -- our CEO had been known to use those  
24 terms for those two companies.

25 Q. Repeatedly, right?

1 A. Yeah.

2 Q. And that's part of the philosophy at T-MO -- T-MO?

3 A. The un-carrier is the philosophy at T-Mobile.

4 Q. Yeah, and that --

5 A. Not necessarily following the leaders, following AT&T  
6 and Verizon, just because they're the big guys.

7 Q. Yeah, they're stupid. They don't know what they're  
8 doing, do they?

9 A. We don't believe that they're -- that they've been  
10 doing things that are in the best interest of wireless  
11 customers.

12 MR. WARD: Let's look at Plaintiff's Exhibit 184.

13 Q. (By Mr. Ward) You recall me showing this exhibit, the  
14 cover of it, during opening?

15 A. I'll -- I'll take your word that you did.

16 Q. Okay.

17 A. I couldn't see the monitor during the opening --

18 Q. I got you.

19 A. -- based on where I was sitting.

20 Q. I'll represent to you that I showed this cover page  
21 during the opening.

22 THE COURT: Gentlemen, let's be sure you talk one  
23 at a time. Don't talk over each other.

24 Let's continue.

25 MR. WARD: And let's go to Page 6 of that

1 document, and zoom in where it says "wireless providers."

2 Q. (By Mr. Ward) And I'll represent to you that this is  
3 an industry publication. Have you seen the IBISWorld  
4 publication before?

5 A. Yes, in general. Not necessarily this specific  
6 document, but --

7 Q. All right. It says here that wireless providers have  
8 struggled to keep up with demand, devoting a significant  
9 amount of resources to expand network capacity.

10 You see that?

11 A. Yes.

12 Q. That the battle for wireless spectrum has been a large  
13 source of competition, and the struggle for new subscribers  
14 in this saturated market has been challenging.

15 You see that?

16 A. Yes, I do.

17 Q. And then carriers' appetite for both more spectrum and  
18 subscribers for -- has played out in a series of  
19 competitive auctions and merger -- merger and acquisition  
20 attempts.

21 Do you see that?

22 A. I do.

23 MR. WARD: And let's go to Page 25 of this  
24 document. Yeah, right there at the top.

25 Q. (By Mr. Ward) And on Page 25 of the document, it talks

1 about spectrum availability and regulatory conditions are  
2 the most formidable barriers to entry in the wireless  
3 industry.

4 Right?

5 A. I see that.

6 Q. So if you want to become a -- a carrier, you've got to  
7 be able to access this spectrum, don't you?

8 A. That's correct.

9 Q. And you've got to have the financial ability to get it,  
10 right?

11 A. That's correct.

12 Q. And so it wouldn't surprise you that an individual  
13 inventor might not be able to design an entire system,  
14 purchase spectrum, and become a wireless carrier overnight,  
15 correct?

16 A. Correct.

17 Q. It takes time and a lot of resources?

18 A. I think it's a capital-intense industry, for sure.

19 Q. And it's not like there's spectrum coming online  
20 every month or every year, is there?

21 A. I don't believe so.

22 Q. It can take up to 13 years for the government to bring  
23 new spectrum to market, can't it?

24 A. Yes. It can be long gaps between these types of sales  
25 and things like that.

1 Q. And I'll show you that.

2 MR. WARD: It's on Page 38 of the document, the  
3 paragraph starting in 2016.

4 Q. (By Mr. Ward) Do you see where it says: In 2016, the  
5 FCC undertook an auction for 600 megahertz spectrum?

6 A. I do.

7 Q. And it says: But bringing more spectrum to the market  
8 takes an average of 13 years.

9 Correct?

10 A. I see that.

11 Q. And it costs billions of dollars, tens of billions of  
12 dollars, does it not?

13 A. I -- yes. It all depends on how much you're buying and  
14 what it is.

15 MR. WARD: Let's look at Plaintiff's Exhibit 1387.

16 Q. (By Mr. Ward) I'll represent to you this is a document  
17 that we showed in opening that was also addressed during  
18 Mr. Baker's deposition yesterday. Did you see it then?

19 A. Again -- oh, I'm sorry. This is Baker.

20 Q. Yes.

21 A. Yes, I did see those exhibits.

22 Q. And I believe it was. It's this un-carrier network  
23 capacity strategy from June of 2014?

24 A. Yes.

25 Q. And we've seen --

1                   MR. WARD: Page -- Page 3, that second full  
2 paragraph.

3 Q. (By Mr. Ward) You recall the testimony about  
4 un-carrier, that T-Mobile had success in an increased  
5 network demand to the point where it will exceed current  
6 capacity starting in 2015?

7 A. I'm sorry. Are you asking whether I recall -- whether  
8 Mr. Baker said this?

9 Q. No, sir. Do you see the document?

10 A. Yes, I do.

11 Q. And I read that correctly, correct?

12 A. Yes.

13 Q. And it talks about running out in 2015.

14 A. Where it will exceed capacity starting in 2015, yes.

15 Q. Yes.

16                   And that planned spectrum purchases were  
17 insufficient to close demand/capacity imbalance.

18                   Do you see that?

19 A. I see that.

20 Q. And so T-Mobile had to come up with a way to address  
21 this problem, did they not?

22 A. Yes.

23 Q. And T-Mobile identified this problem as well in its  
24 filings with the Securities and Exchange Commission, did it  
25 not?

1 A. I think there were some SEC documents that were  
2 mentioned earlier in the trial. I don't remember  
3 exactly --

4 Q. Well, let's look at them.

5 A. Yeah.

6 MR. WARD: Plaintiff's Exhibit 76.

7 Q. (By Mr. Ward) And who is the Securities and Exchange  
8 Commission?

9 A. They're the federal regulatory body that makes sure  
10 that -- just to --

11 Q. Very general.

12 A. Yeah. Make sure everything is up and up for investors  
13 and that companies are disclosing information to --  
14 relating to publicly traded companies.

15 Q. And you've got to make sure that the information that  
16 you put in these documents is accurate, don't you?

17 A. Yes.

18 Q. And am I correct that they're signed under penalty of  
19 perjury?

20 A. That's correct.

21 Q. And folks go to jail if they falsify these documents,  
22 don't they?

23 A. Yes.

24 Q. Very --

25 A. They're certainly very important.

1 Q. They're very important. They can go to jail.

2 December 31, 2014 is the date on this document,  
3 correct?

4 A. That's correct.

5 Q. Right at the top?

6 A. Uh-huh.

7 Q. And that's after the un-carrier document that we just  
8 looked at from June of '14, correct?

9 A. Correct.

10 MR. WARD: And let's go to Page 9 of that filing,  
11 under Competition.

12 Q. (By Mr. Ward) And in that document under the section  
13 of Competition, it says: AT&T and Verizon are  
14 significantly larger than us and may enjoy greater  
15 resources and scale advantages as compared to us.

16 Is that what it says?

17 A. Yes.

18 Q. And it says: Competitive factors within the wireless  
19 telecommunications industry include -- it's got a number of  
20 competitive factors. One of them is the availability of  
21 additional spectrum.

22 Correct?

23 A. That's right. That's one of the multiple factors that  
24 are mentioned here.

25 Q. One of -- one of multiple factors, I agree.

1                   MR. WARD: Let's look at Page 11 of the document  
2 under Risks Related.

3 Q. (By Mr. Ward) Now, this is T-Mobile identifying the  
4 risks related to their business, correct?

5 A. That's the heading, yes.

6 Q. And it says: The scarcity and cost of additional  
7 wireless spectrum and regulations relating to spectrum use  
8 may adversely affect our business strategy and financial  
9 planning.

10                  Is that what document says?

11 A. That's what the document says.

12                  MR. WARD: And let's go to Page 14. "If we are  
13 unable."

14 Q. (By Mr. Ward) And did T-Mobile tell the world back in  
15 December of 2014 that: If we are unable to take advantage  
16 of technological developments on a timely basis, then we  
17 may experience a decline in demand for our services or face  
18 challenges in implementing or evolving our business  
19 strategy?

20 A. That's what we said.

21 Q. Was that true?

22 A. That's in the document, yes.

23                  MR. WARD: Let's look at Plaintiff's Exhibit 1396.

24 Q. (By Mr. Ward) And have you seen this document before,  
25 Mr. McGrath?

1 A. I don't recall off the top of my head with this very  
2 generic title.

3 Q. Okay.

4 MR. WARD: Let's -- let's flip through this  
5 document, please, Mr. Horseman.

6 Next page. Next page.

7 Q. (By Mr. Ward) And so we've got there the 2015 network  
8 technology priorities. It says: LTE leadership, 300  
9 million LTE covered pops.

10 Do you see that?

11 A. Yes, I do.

12 Q. And L700 coverage, that's the spectrum we've heard  
13 about?

14 A. Yes. We've -- I know we've discussed that.

15 Q. And then VoLTE quality. Do you see that?

16 A. Yes, I do.

17 MR. WARD: Let's go to Page 9 of that document.

18 Q. (By Mr. Ward) And so -- and this is an internal  
19 T-Mobile document, correct?

20 A. I think that's correct. I think this was one of the  
21 Baker exhibits.

22 Q. Yes, sir.

23 A. Mr. Baker's exhibits?

24 Q. Yes, sir.

25 And the document says: "Why VoLTE?" So that's a

1 question that T-Mobile is posing to itself in this  
2 document, right?

3 A. I believe -- I believe -- again, I'd have to -- I'd  
4 defer to Mr. Baker's testimony on this, but I believe he  
5 said it was an internal presentation to some network folks.

6 Q. And it's "Why VoLTE?," question mark, correct?

7 A. Yes.

8 Q. And Innovation and Growth is one of the -- the -- the  
9 headings there, correct?

10 A. That's correct.

11 Q. And then on the right-hand side, it says: Technically  
12 and economically superior.

13 Correct?

14 A. That's what it says, yes.

15 Q. And then this -- we've seen this, that VoLTE is the  
16 only technology for 700 megahertz and critical for us  
17 getting to 300 million covered pops in 2015.

18 A. That's what it says.

19 Q. And Ericsson didn't say, you've got to go to VoLTE.  
20 You've got to get more customers. You've got to save your  
21 spectrum. Ericsson wasn't telling you to do that, were  
22 they?

23 A. I don't think Ericsson had anything to do with this  
24 document, no.

25 Q. Well, they didn't have anything to do with T-Mobile's

1 decision to implement VoLTE, did they?

2 A. Oh, I'm sorry. I thought were you were talking about  
3 the deployment. So you're saying Ericsson didn't tell us  
4 to go to VoLTE?

5 Q. Correct.

6 A. I don't believe so, no.

7 Q. That would be a T-Mobile decision.

8 A. That's correct.

9 Q. And Ericsson is not the only base station in the world,  
10 is it? There's other people that manufacture and sell base  
11 stations, aren't there?

12 A. That's correct. They're not the only base station  
13 supplier.

14 Q. You've got options, right?

15 A. We do.

16 Q. And you think Ericsson knows that?

17 A. I'm sure they do. That's their business.

18 Q. And since you're T-Mobile, you get to tell the folks  
19 you buy equipment from, you sell that to us, we'll  
20 implement it, and if we get sued for patent infringement,  
21 you pay the damages.

22 A. Roughly. I mean, you're getting back to the indemnity  
23 point.

24 Q. Yes, sir.

25 A. It's a lot more complicated than that, but at -- at a

1 very high level, yes.

2 Q. That's not a bad position to be in, is it?

3 A. Again, it depends. I mean, we -- that's -- we go to  
4 great lengths to -- to do business with people we think are  
5 reputable suppliers, so we'll back up their products.

6 Q. You have that agreement in -- indemnity agreement with  
7 all your suppliers?

8 A. I don't know if I can say all of our suppliers,  
9 certainly all of our major infrastructure suppliers and --  
10 and all of our base station suppliers.

11 Q. So let's finish by looking at what you told the world,  
12 you being T-Mobile, in your Securities and Exchange filings  
13 in 2017.

14 MR. WARD: Plaintiff's Exhibit 276.

15 Q. (By Mr. Ward) You see the date there at the top,  
16 December 31, 2017?

17 A. I do.

18 Q. Same deal with -- with filing this document, serious  
19 document, just like the last one?

20 A. That's correct.

21 MR. WARD: And let's look at Page 8. Up --  
22 network capacity growth, and get the first bullet point.

23 Q. (By Mr. Ward) And so in December of 2017, this is  
24 after, obviously, the document that we looked at for  
25 "Why VoLTE?"

1                   Right?

2 A. I'm sorry, could you repeat the question?

3 Q. Yeah.

4 A. I was reading.

5 Q. I just wanted to clarify, this is, what, two years  
6 after the document that we saw about "Why VoLTE?," and  
7 the -- the benefits of VoLTE technology?

8 A. Roughly, yes.

9 Q. And what T-Mobile told its investors and the rest of  
10 the world under network capacity growth is that we continue  
11 to expand our capacity through the re-farming of existing  
12 spectrum, right?

13 A. Yes, yes.

14 Q. And re-farming existing spectrum, you know what that  
15 means, don't you?

16 A. I do.

17 Q. You were able to move the voice calls off of 3G onto  
18 your 4G network, correct?

19 A. That's perhaps a part of it, but I -- I think this  
20 document -- I think re-farming really refers a lot more to  
21 just moving to the next generations of technologies and  
22 freeing up spectrum on older generations, but that may be a  
23 part of it.

24 Q. Did you free up spectrum when you moved voice calls off  
25 of that older 3G network and moved it on to your 4G LTE

1 network?

2 A. We -- it had some benefits that may have included the  
3 spectrum-related benefits you're talking about.

4 Q. And then -- then T-Mobile says: And implementation of  
5 new technologies, including Voice over LTE, VoLTE.

6                   Correct?

7 A. That's right.

8 Q. And then you note there that VoLTE comprised almost 80  
9 percent of total voice calls as of December 31, 2017?

10 A. That's certainly what the document says, yes.

11 Q. Up from 64 percent as of December 31, 2016?

12 A. Correct.

13 Q. And then you say -- I say you, T-Mobile says: Moving  
14 voice traffic to VoLTE frees up spectrum and allows for the  
15 transition of spectrum currently used for 2G and 3G to 4G  
16 LTE.

17 A. That's --

18 Q. That's at least what --

19 A. Oh, I'm sorry.

20 Q. My apologies. Go ahead and finish your answer.

21 A. That's what it says, yes.

22 Q. You don't dispute that, do you?

23 A. No, not at all.

24 Q. All right.

25                   MR. WARD: That's all I have. I'll pass the

1 witness.

2 THE COURT: Cross-examination by the Defendants.

3 Proceed when you're ready, Ms. Smith.

4 MS. SMITH: May it please the Court.

5 CROSS-EXAMINATION

6 BY MS. SMITH:

7 Q. Good morning, sir.

8 A. Good morning.

9 Q. Now, we've been sitting next to each other this week  
10 at -- at counsel table, so -- so we've met?

11 A. Yes, we have met.

12 Q. And you understand that in addition to representing  
13 Ericsson, I also represent T-Mobile because Ericsson's  
14 standing up for its customer and defending it in this case?

15 A. That's correct.

16 Q. Now, the reason T-MO is in this courtroom is because  
17 the Plaintiff sued them, correct?

18 A. That's right.

19 Q. Is there any way in the world to come to court and  
20 defend yourself without lawyers and experts and such?

21 A. No. That'd be a bad plan, but...

22 Q. Mr. Ward asked you about the fact that you're being  
23 paid to come here and speak to the jurors, correct?

24 A. That's correct.

25 Q. And like Mr. Jorgensen, did you demand from T-MO that

1 you'd be paid two to three times your salary to do so?

2 A. No. I don't get anything extra for being here. It's  
3 just part of my job.

4 Q. And Mr. Ward said that cases are really expensive. You  
5 agreed with that?

6 A. I do.

7 Q. And they're even more expensive when your witnesses  
8 demand to be paid two or three times their normal rate,  
9 wouldn't you think?

10 A. That's true.

11 Q. Were you here when Judge Gilstrap instructed the jury  
12 on the -- you've been here every day of trial, have you  
13 not?

14 A. I've been here every day, yes.

15 Q. Okay. And Judge Gilstrap gave the jurors some  
16 instructions on the first day about zealous advocacy.

17 Do you remember that?

18 A. I recall something like that, yes.

19 Q. Okay. And that's actually a little bit of what we saw  
20 when we saw Mr. Kubehl cross-examine Mr. Jorgensen; is that  
21 correct?

22 MR. WARD: Objection, leading.

23 THE COURT: Sustained. This is an adverse witness  
24 to the Plaintiff.

25 Q. (By Ms. Smith) In your opinion --

1                   THE COURT: And he's Dr. Jorgensen, Ms. Smith.

2                   MS. SMITH: I apologize, Your Honor.

3 Q. (By Ms. Smith) In your opinion, what did we see in the  
4 courtroom when Mr. Kubehl cross-examined Dr. Jorgensen?

5 A. I think he was trying to bring out a question about  
6 some -- something that had been disclosed about -- about  
7 Dr. Jorgensen, asking him a question.

8 Q. Mr. Ward talked about cleaning up your mess. Out in  
9 the real world, outside of this courtroom, who does  
10 T-Mobile, as Ericsson's customer, look to in the real world  
11 when they want to know how an Ericsson base station works?

12 A. Ericsson.

13 Q. As a customer, who does T-Mobile look to when something  
14 goes wrong with an Ericsson base station?

15 A. We would look to Ericsson.

16 Q. Who's going to come to court today and explain to the  
17 jurors how Ericsson base stations work?

18 A. Ericsson and its witnesses.

19 Q. Whether you buy a product -- if I go on down and buy a  
20 product at Walmart or if I'm buying products in the telecom  
21 industry, what is your expectation as a consumer as to  
22 whether or not the product maker should stand up for the  
23 product?

24 A. Well, I would think -- certainly in this case, and even  
25 in the context of, you know, ordinary consumer products in

1 my life, I would expect that if there are infringement --  
2 patent infringement allegations against those products,  
3 that whoever I bought it from would stand up to defend  
4 their products. And I think that's what Ericsson is doing  
5 in this case for T-Mobile.

6 Q. All right. Mr. McGrath, how did you come to be -- I  
7 believe it was senior corporate counsel at T-MO?

8 A. It's principal corporate counsel.

9 Q. I apologize.

10 A. It doesn't really matter that much.

11 Q. Principal corporate counsel?

12 A. It's -- I -- you mean how did I -- well...

13 Q. You can start with your education.

14 A. Yeah, I -- I went to college and law school, and when I  
15 came out of law school, I took a job at a law firm.

16 I was an outside lawyer, like many of the lawyers  
17 here in this courtroom. And then at one point in time  
18 after practicing for several years, I was interested in  
19 going back to Seattle where I'm originally from.

20 And I was approached about an opportunity to take  
21 an in-house position being the -- the lawyer who works  
22 inside at the corporation for Microsoft, which was a  
23 company from my hometown that was doing a lot of good  
24 things, and so I went there.

25 As I think I mentioned earlier in my testimony, I

1 practiced at Microsoft for 14 years. And then fast forward  
2 to -- at a point in time about four years ago, I decided to  
3 make a switch to T-Mobile to take a kind of similar job at  
4 T-Mobile to what I had been doing at Microsoft. And that's  
5 how I ended up here.

6 Q. Is -- is what you're doing today a little bit out of  
7 the ordinary from your day-to-day job?

8 A. Yes, I'd say so.

9 Q. Why are you the person representing T-Mobile here  
10 today in court?

11 A. Because I am the person at T-Mobile who knows most  
12 about the overall set of facts that are relevant to what  
13 we're talking about here in court.

14 Q. And why is that?

15 A. Because this is my case. I've -- I've managed it since  
16 the day it came in the door and, so I've been involved from  
17 the very beginning when we first received the complaint and  
18 -- and the analysis in contacting Ericsson and in trying to  
19 figure out what T-Mobile's views are about this overall  
20 dispute.

21 Q. How would things be different if we paraded 10 T-Mobile  
22 engineers into this courtroom for trial?

23 A. They wouldn't be any different. I think we'd still be  
24 looking to the Ericsson witnesses for the details in this  
25 case.

1 Q. Does T-Mobile respect patents?

2 A. Absolutely.

3 Q. What's T-Mobile do to make sure that it's respecting  
4 other company's intellectual property rights?

5 A. Well, I think we do a number of different things, but  
6 principally, for purposes of this case, as I mentioned  
7 earlier, we go to great lengths to enter into contracts and  
8 deal with entities, companies who believe in the respect  
9 for intellectual property rights and who are also making  
10 representations about their products and backing them up,  
11 that they're, you know, free of infringement of other  
12 people's intellectual property rights.

13 Q. In this particular case, T-Mobile -- T-Mobile has been  
14 sued?

15 A. That's correct.

16 Q. And T-Mobile received a complaint at some point?

17 A. We did.

18 Q. What are the steps that -- first steps that T-Mobile  
19 took when it received the complaint?

20 A. When -- when the complaint came in the door, I took a  
21 look at the complaint and the patents and products that  
22 were referenced in that complaint -- well, when I say that,  
23 I mean, I looked at the patents, and I saw the references  
24 to the -- the products.

25 And from my review of those, I could tell that

1 what we were talking about in this case was functionality  
2 in the Ericsson base stations.

3 So I basically picked up the phone and contacted  
4 Ericsson to get their help on this matter.

5 Q. Well, why not just reach out -- you have engineers at  
6 T-Mobile, do you not?

7 A. We do. We have lots of engineers.

8 Q. Why not reach out to the T-MO engineers and get their  
9 views?

10 A. Because I can tell from the allegations in this case  
11 that -- again, they're about kind of deep details in the  
12 operation of the Ericsson base stations, and I know from  
13 past experience on my cases, if I would ask my folks about  
14 that, they would tell me to talk to the Ericsson engineers  
15 or the Ericsson personnel.

16 Q. Now, when you buy a base station from Ericsson, they  
17 don't just give you -- give you a base station and nothing  
18 more, do they?

19 A. No. There's -- there's lots -- there are -- they  
20 provide the products with a lot of documentation and  
21 associated support from Ericsson personnel, but it's at a  
22 level that's appropriate for what we need to use the  
23 products in our network.

24 Q. Do you believe, in this instance, that T-Mobile has  
25 handled the patent infringement claim appropriately?

1 A. Absolutely.

2 Q. Now, we heard a little bit -- well, strike that.

3                   Where does T-Mobile rank in the pecking order as  
4 far as market share with the carriers?

5 A. I believe now we are the No. 3 carrier in the United  
6 States.

7 Q. And how long have you been No. 3?

8 A. Maybe a year or two, something -- I don't remember the  
9 exact date where we -- where we passed Sprint as -- went  
10 from 4 to 3.

11 Q. Do you have any plans to try to move up in the ranks?

12 A. We are always trying to improve and get better and  
13 compete in the marketplace.

14 Q. And what's the plan for doing that?

15 A. I'd say, principally, it's our overall un-carrier  
16 strategy about making our services different and better for  
17 customers so that wireless customers will want to use  
18 T-Mobile as opposed to the services of our competitors.

19 Q. And if your CEO got in front of everyone down in Dallas  
20 and said, you know, our motto is going to be go along and  
21 get along or follow the herd, would that work?

22 A. I can't imagine him saying that to start, and I don't  
23 believe it would work.

24 Q. And how would that work out for the consumers?

25 A. I -- I don't think it would be a value add for the

1 consumers at all. I think we're -- we're on the forefront  
2 of change in this industry to make it better for consumers.

3 Q. And, specifically, how is T-MO doing that?

4 A. They're -- we have a lot of different kind of what I  
5 think we would refer to internally and externally as  
6 un-carrier moves, but examples of that would be no  
7 contracts, you know, flat rate plans, no data overages.

8 There are multiple of these moves that we've made  
9 in the wireless industry that essentially the rest of the  
10 carriers have been forced to adopt because it sounds pretty  
11 appealing to customers.

12 Q. And we've heard in this lawsuit that other -- some  
13 other carriers may have license to these patents. Is that  
14 another way in which T-MO is unwilling to follow the herd?

15 A. Perhaps in that we are not going to take a license to  
16 these patents simply because the two major wireless  
17 carriers happen to -- for whatever reasons, they did.

18 MS. SMITH: I'll pass the witness.

19 Thank you, sir.

20 THE COURT: Is there redirect, Mr. Ward?

21 MR. WARD: Yes, Your Honor.

22 REDIRECT EXAMINATION

23 BY MR. WARD:

24 Q. I think we can agree it'd be a bad idea to show up  
25 without a lawyer --

1 A. Yeah. Sorry.

2 Q. -- with all these lawyers around, correct?

3 A. I think that's right, yes.

4 Q. So you don't fault Dr. Jorgensen for showing up at  
5 depositions, and in this case, with lawyers that IV paid to  
6 represent him, do you?

7 A. I certainly don't fault Dr. Jorgensen for showing up at  
8 a deposition with a lawyer of some sort.

9 Q. You think it's surprising that IV was paying for his  
10 counsel?

11 A. I think -- I think there's some questions about whether  
12 Mr. Jorgensen might have been represented individually by  
13 different lawyers personally, but you can handle cases in  
14 different ways.

15 THE COURT: And, Mr. McGrath, it's Dr. Jorgensen.

16 THE WITNESS: I'm sorry. Dr. Jorgensen.

17 Q. (By Mr. Ward) Dr. Jorgensen, right?

18 A. Yeah.

19 Q. And let's talk about this allegation of him charging  
20 two to three times his normal rate. You heard Ms. Smith  
21 just say that, correct?

22 A. Yes, I did.

23 Q. Now, when you started out as a lawyer and you went to a  
24 law firm, what law firm did you go to?

25 A. I worked at a couple of different law firms, but

1 Latham & Watkins.

2 Q. That's a big law firm, isn't it?

3 A. It is.

4 Q. And did you go in as a partner, or did you go in as an  
5 associate?

6 A. I started out as an associate.

7 Q. Okay. So did Latham & Watkins bill you out at one  
8 rate?

9 A. Did they bill -- I'm sorry. Can you we repeat the  
10 question?

11 Q. Sure. Did you have an hourly rate at which  
12 Latham & Watkins billed you out to its clients?

13 A. Yes.

14 Q. And what was that rate?

15 A. I have -- I honestly don't remember.

16 Q. Just -- was it \$300.00?

17 A. I -- I wouldn't be surprised if it was more than that,  
18 but it depended on the year --

19 Q. Okay.

20 A. -- all that sort of stuff.

21 Q. Let's assume it's \$300.00, okay? And let's just use a  
22 hypothetical lawyer at a law firm. His billing rate or her  
23 billing rate is \$300.00 an hour.

24 Are you with me?

25 A. Yeah.

1 Q. If you multiply the number of hours that an associate  
2 might work -- and let's do it reasonable -- 2,000 hours a  
3 year. That'd be kind of low for a first-year associate,  
4 wouldn't it?

5 A. Maybe at Latham --

6 Q. Yeah.

7 A. -- it's possible.

8 Q. Let's say 2,000 hours. That'd be \$600,000.00, wouldn't  
9 it?

10 A. I'll -- I'll go with you on the math.

11 Q. Okay. And do you think then that you look at that  
12 associate's tax return at the end of the year, and he or  
13 she would have been paid \$600,000.00?

14 A. No.

15 Q. It'd be a lot less than that, wouldn't it?

16 A. Yeah. If you're getting at -- I wouldn't make what the  
17 firm makes.

18 Q. Correct. Right?

19 A. Yeah.

20 Q. But if you got hired as an independent consultant and  
21 you were working for someone outside the firm and the firm  
22 said, go work for them, you might still be billed at  
23 \$300.00 an hour, mightn't you?

24 A. Perhaps.

25 Q. So would it be unfair to say, well, you're billing

1       \$300.00 an hour for your independent consulting, but if we  
2 look at your W-2 from last year, you only made \$100,000.00.

3                   That'd be an unfair comparison, wouldn't it,  
4 Mr. McGrath?

5 A. I think -- I think those two are different things, your  
6 W-2 and your hourly rate.

7 Q. What you were making the year before might be totally  
8 unrelated to what you're charging for consulting in the  
9 next year, might'n it?

10 A. Could be.

11 Q. All right. Now, you worked at Microsoft for many  
12 years?

13 A. 14, about.

14 Q. Smart people there?

15 A. Very.

16 Q. Knew what they were doing?

17 A. They certainly are leaders in their field.

18 Q. Good scientists, good technologists, good in-house  
19 lawyers?

20 A. Yes.

21 Q. Know how to evaluate patents?

22 A. Yes.

23 Q. Do you know how much money they've invested in  
24 Intellectual Ventures?

25 A. I have a rough sense of that.

1 Q. What's your rough sense of that?

2 A. Well, I mean, I don't know the -- the specific dollars,  
3 but I'm -- I know they're one of the original investors in  
4 the -- in the company.

5 Q. It's a bunch of money, isn't it?

6 A. Probably, yes.

7 Q. We've talked a lot about competition between AT&T,  
8 Verizon, and T-Mobile, right?

9 A. Yes.

10 Q. And Verizon, AT&T are paying for rights to these  
11 patents and a portfolio of other patents, aren't they?

12 A. I understand that they have portfolio licenses to IV's  
13 portfolio.

14 Q. And the un-carrier has decided not to do that, right?

15 They don't want a license to these patents because they say  
16 they're no good?

17 A. We don't believe we infringe these patents, and so we  
18 haven't taken a license.

19 Q. All right.

20 MR. WARD: Pass the witness.

21 THE COURT: Further cross, Ms. Smith?

22 MS. SMITH: No, Your Honor. May the witness be  
23 excused?

24 THE COURT: You may step down, Mr. McGrath.

25 THE WITNESS: Thank you.

1                   THE COURT: And since you're T-Mobile's corporate  
2 representative, you're not excused. You need to go back,  
3 and sit at the table.

4                   MS. SMITH: You're correct, Your Honor.

5                   I apologize.

6                   THE COURT: All right. Plaintiff, call your next  
7 witness.

8                   MR. WARD: Your Honor, the Plaintiff rests.

9                   THE COURT: All right. Plaintiff having rested  
10 its case-in-chief, before we proceed with the Defendants'  
11 first witness, ladies and gentlemen, we're going to take a  
12 short recess.

13                  You may close and leave your notebooks in your  
14 chairs.

15                  Follow all the instructions I've given you,  
16 including, as you would expect me to remind you, not to  
17 discuss the case among each other, and we'll be back  
18 shortly to continue with the Defendants' first witness.

19                  The jury is excused for recess.

20                  COURT SECURITY OFFICER: All rise.

21                  (Jury out.)

22                  THE COURT: The Court stands in recess.

23                  (Recess.)

24                  COURT SECURITY OFFICER: All rise.

25                  THE COURT: Be seated, please.

1           All right. This morning, before we began the  
2 trial and before I brought the jury in, I met with counsel  
3 in chambers. We took up certain disputes regarding  
4 demonstratives and other matters.

5           I've had the benefit of additional time to  
6 consider some of those. I gave direct guidance on some  
7 issues in chambers, but I did not give ultimate or direct  
8 guidance on other matters.

9           With regard to Defendants' proposed Slide 48 that  
10 references and has a picture of the front cover of DX-10,  
11 I'm going to grant the objection to that slide by  
12 Plaintiffs and exclude that slide.

13           I'm persuaded it's an attempt to reopen the claim  
14 construction process. That would be improper.

15           Also, we had a lengthy discussion about Mr. Skarby  
16 as a witness for the Defendants. I reminded counsel  
17 explicitly that Mr. Skarby is a fact witness and is not  
18 designated as an expert, although he has a technical  
19 position with Ericsson.

20           And because he is a fact witness and not an expert  
21 witness, he is not entitled to give expert analysis or  
22 opinions.

23           He's entitled only to testify as to facts within  
24 his personal knowledge. The characterization of those  
25 facts, opinions, subjective values and judgments are

1 outside the purview of a fact witness. And I tried to  
2 remind counsel for both parties that that would not be  
3 permissible with this witness.

4 Also, I've checked Dr. Wicker's expert report, and  
5 he references Mr. Skarby for a very limited purpose of only  
6 addressing induced infringement. There's no other reliance  
7 by Dr. Wicker in his report on Mr. Skarby.

8 I will not permit Mr. Skarby to testify and then  
9 Dr. Wicker expand the scope of his report or add additional  
10 support for his existing conclusions because of the live  
11 testimony of Dr. -- of Mr. Skarby that may touch on items  
12 beyond induced infringement.

13 It would be an improper attempt to supplement an  
14 expert's report if that were to happen.

15 So I want to put the Defendants on notice they do  
16 not need to and should not use Dr. Wicker as a way to  
17 verify or readdress anything Mr. Skarby testified to  
18 outside of the one limited issue in which Dr. Wicker relies  
19 on Mr. Skarby.

20 Are those instructions clear?

21 MR. KUBEHL: May I approach, Your Honor?

22 THE COURT: You may.

23 MR. KUBEHL: Those -- those instructions are  
24 clear.

25 Dr. Wicker does have support in his report to independently

1 evaluate documents that were discussed this morning,  
2 specifically Exhibits 277 --

3 THE COURT: I'm not talking about documents.

4 MR. KUBEHL: Okay.

5 THE COURT: I'm talking about the oral testimony  
6 of Mr. Skarby as a late-breaking and prejudicial way to  
7 supplement and strengthen the conclusions that are already  
8 set forth in Dr. Wicker's report where he does not rely on  
9 Mr. Skarby.

10 MR. KUBEHL: Understood. I'll just point out one  
11 thing to Your Honor that it will not be my intent at all to  
12 represent Mr. Skarby as an expert in this case.

13 However, his title at Ericsson is expert in  
14 resource -- radio resource management. That's just his  
15 title. I would --

16 THE COURT: Then --

17 MR. KUBEHL: I would ask him what his title is --

18 THE COURT: Then when he answers what his title  
19 is, then you need to clarify for the benefit of the jury,  
20 you are not here as an expert witness, you are here as a  
21 fact witness only, correct?

22 MR. KUBEHL: Yes.

23 THE COURT: And let him confirm that. That will  
24 avoid any confusion.

25 MR. KUBEHL: Thank you, Your Honor.

1                   THE COURT: Okay. Thank you.

2                   All right. Is there anything else that needs to  
3 be addressed before we bring the jury?

4                   Is there a question, Mr. Kubehl, about the easel  
5 and the board and Mr. Skarby's examination? Did we cover  
6 that to your satisfaction, or do you still have some  
7 questions?

8                   MR. KUBEHL: No. I think he can use the -- the  
9 pointer, if that's to Your Honor's liking.

10                  THE COURT: And then on Dr. --

11                  MR. KUBEHL: It will just be a matter of where we  
12 set it up.

13                  THE COURT: Then on Dr. Wicker, you intend to put  
14 the easel here at the partition?

15                  MR. KUBEHL: That would be our preference if we  
16 could do that.

17                  THE COURT: All right. And do you have in mind to  
18 stand on one side of the easel with him on the other side,  
19 or do you want to question him from the podium? Let's talk  
20 about how we do that.

21                  MR. KUBEHL: If it worked for Your Honor, I could  
22 stand off behind so I'm not blocking anyone's view and  
23 question from over there just so I can see what he's doing.  
24 It's not going to be a long examination at the easel.

25                  THE COURT: Well, what's most commonly done is

1 that you would stand beside the easel on the opposite side  
2 of it from the witness where you could easily lean your  
3 head forward and see what he writes without getting into  
4 the jury's space on the other side of the partition, and  
5 that's what I'd prefer.

6 MR. KUBEHL: Very good.

7 THE COURT: Okay. Let's bring in the jury,  
8 please, Mr. Johnston.

9 COURT SECURITY OFFICER: All rise for the jury.

10 (Jury in.)

11 THE COURT: Please be seated.

12 Defendants, call your first witness.

13 MS. SMITH: Your Honor, Defendants call Mr. Johan  
14 Norrby.

15 THE COURT: If you'll come forward and be sworn,  
16 sir.

17 (Witness sworn.)

18 THE COURT: Please come around, sir. Have a seat  
19 on the witness stand.

20 Ms. Smith, you may proceed when you're ready with  
21 your direct examination.

22 MS. SMITH: Thank you, Your Honor.

23 JOHAN NORRBY, DEFENDANTS' WITNESS, SWORN

24 DIRECT EXAMINATION

25 BY MS. SMITH:

1 Q. Good morning, Mr. Norrby.

2 A. Good morning.

3 Q. If you would, please introduce yourself to the Court  
4 and the jurors.

5 A. Yes. My name is Johan Gunnar Norrby.

6 Q. Now, Mr. Norrby, you're not from around these parts,  
7 are you?

8 A. No, I live in Stockholm in Sweden.

9 Q. Mr. Norrby, how big is Sweden?

10 A. Sweden is not a very big country. We have 10 million  
11 inhabitants. To be compared with Texas, it's -- it's a  
12 very small town.

13 THE COURT: Sir, would you pull the microphone a  
14 little closer to you, please?

15 THE WITNESS: Sure.

16 THE COURT: Thank you. Continue.

17 MS. SMITH: Thank you, Your Honor.

18 Q. (By Ms. Smith) Is English your first language?

19 A. No. My mother tongue is Swedish, but my first words  
20 were very much in English.

21 Q. How were your first words in English?

22 A. Well, that is because my family moved to -- to Atlanta  
23 in the U.S. when I was two months old, and I lived there  
24 until I was six years old. And my stay in -- in U.S. had a  
25 profound impact on what I've been doing in -- in my later

1 part of life.

2 And that is because when I was around six years  
3 old, living in U.S., the Apollo program was very -- a very  
4 big thing here. And I was totally fascinated by rockets  
5 and already then I decided that I wanted to be an engineer.

6 Q. And you wanted -- you chose to testify in English  
7 today; is that correct?

8 A. That is correct.

9 Q. Have you ever testified before to an American jury?

10 A. No, I haven't.

11 Q. Sir, do you have some family back in Sweden?

12 A. Yes. I'm married, and I have two daughters, 18 and 21  
13 years old.

14 Q. And what do you all enjoy doing in your time away from  
15 work?

16 A. First of all, I -- I work a lot, but during my spare  
17 time, I prefer to spend it with family. And I also like to  
18 do outdoor activities like running and biking. And once in  
19 a while, my wife drags me to a lot of cultural events.

20 Q. I heard someone mention that you actually bike to work.  
21 Is there any truth to that?

22 A. Yes. It's only 15 miles back and forth, so it's not  
23 much.

24 Q. Would you describe your educational background to the  
25 jurors?

1 A. Sure. I have a university degree in Master of  
2 Engineering, specialized in computer architecture. I also  
3 have Bachelor of Science degree in business administration  
4 and economics. Both degrees are from Lund University.

5 Lund University is one of the biggest universities  
6 in Sweden, founded in the 17th century, and it is about the  
7 same size as Texas University.

8 Q. I think we have a picture up on the screen. Is that  
9 Lund University?

10 A. It's not the university. It's a church in the  
11 university town.

12 Q. At the university?

13 A. Yeah.

14 Q. Okay.

15 MS. SMITH: I apologize. There -- there we go.  
16 The clicker is a little slower. I apologize.

17 Q. (By Ms. Smith) Mr. Norrby, who do you work for?

18 A. I work for Ericsson.

19 Q. And how long have you been at Ericsson?

20 A. I started working in Ericsson in 1996, so slightly more  
21 than 20 years.

22 Q. What's your current position at Ericsson?

23 A. My current position is business controller at product  
24 area networks.

25 Product area networks is a part of Ericsson who is

1 responsible for all products related to radio networks,  
2 base station hardware, and base station software primarily.

3 So I look into the financials for -- for product  
4 area networks. That means revenues, cost of sales,  
5 research and development costs, financial plan, et cetera.

6 Q. And how long have you held that position?

7 A. I've had that position since June 2018.

8 Q. Is that an executive management position?

9 A. Yes, it is. I'm part of the leadership team of product  
10 area networks.

11 Q. What other positions have you held at Ericsson?

12 A. I've had several positions since I started in Ericsson.

13 In 1996, when I started, I was working in sales.  
14 Ericsson and their radio network industry at that time was  
15 very much an untapped market, so I was out hunting new  
16 contracts for Ericsson, very much in Latin America, but  
17 also in other places in the world.

18 Then in 2000, I moved and worked with business  
19 contracts, mainly for the U.S. market when the big  
20 operators here in U.S. went from a technology called TDMA  
21 to another technology called GSM.

22 And the operators I worked with were AT&T and  
23 Cingular, who was an operator at that time but is now AT&T.  
24 But also to Canadian operators, like Rogers, and Mexican  
25 operators, like Telecomm Mexico.

1                   After that, in 2002, I worked for one year with  
2 T-Mobile U.S. in sales.

3                   And after that, I moved to product management,  
4 working with design and development of base stations.

5                   I was working in second generation base stations  
6 with the RBS 2000 family that supports GSM. I worked there  
7 for five years.

8                   And then after that, I have been working with  
9 RBS 6000 base stations which is the latest base station  
10 family for -- for Ericsson, and I worked there for about  
11 six years before I went into the financial part of  
12 Ericsson.

13 Q. Mr. Norrby, if you could tell us a little bit about the  
14 history of Ericsson as a company.

15 A. Sure. Ericsson is a company founded in late 1800. And  
16 we have been making telephones and -- and network  
17 infrastructure for operators for a long time.

18                   It started off by -- by making simple fixed line  
19 telephones. And you see some pictures of how they could  
20 look like before. They were actually quite beautiful in  
21 the beginning, wooden -- wooden phone and very artistically  
22 designed.

23                   And then we had some attempts to make some early  
24 cellular systems in the 1950s, and one of the pictures here  
25 shows a big bulky item. That is actually one of the first

1 mobile phones that was intended for cars.

2 Q. And that's that third picture on the top?

3 A. That is correct.

4 Then the fourth picture to the top you have some  
5 early mobile phones from Ericsson in the GSM days.

6 And on the bottom, you see some pictures on how it  
7 looks like now. So you have a manufacturing facility to  
8 the -- to the left, and the -- also some testing facilities  
9 to the right.

10 Q. Where does the name Ericsson come from?

11 A. The name Ericsson comes from the founder of the  
12 company, Lars Magnus Ericsson. So it's his surname that is  
13 the company name. Lars Magnus Ericsson founded the company  
14 in 1876.

15 And just to give a reference on -- on the age of  
16 the company, it is younger than Smith Wesson, but it's  
17 older than Coca-Cola and Ford Motor Company.

18 Q. Where was the company founded?

19 A. It was founded in Stockholm, Sweden.

20 Q. I have a slide up here. What are we seeing on this  
21 slide as far as the Ericsson logo?

22 A. So this is a slide trying to show why we have the  
23 Ericsson logo. And the reason for the logo comes from a  
24 transformer, which was a very common component for making  
25 fixed line systems.

1                   And a transformer is basically a transformer core  
2 where you have electrical windings on one side and  
3 electrical windings on another side. And you see the blue  
4 electrical windings on the secondary side here. The logo  
5 is a simplification of the secondary windings.

6                   But also nowadays, since we don't use transformers  
7 anymore in our electronics, we can also have the  
8 transformer as a metaphor for what Ericsson represents. We  
9 have to transform our business, our technology every day,  
10 otherwise, we won't survive.

11 Q. Where -- does the company operate only in Sweden?

12 A. No, we don't. We sell radio networks and core networks  
13 to some 180 countries throughout the world.

14 Q. And is the United States included in that 180  
15 countries?

16 A. Yes, it is. We have quite a big representation here in  
17 U.S. Our headquarters is in Plano, Texas. We have about  
18 3,000 employees there.

19                   We also have a research facility in Austin where  
20 we make processors for our equipment. And outside Texas,  
21 we have a lot of representation in U.S. We have a lot of  
22 research and design facilities in California, and we have a  
23 lot of sales representations throughout the country.

24 Q. If you would, Mr. Norrby, describe for the jury, what's  
25 Ericsson do?

1 A. Okay. Ericsson is maybe not that famous. Most of you  
2 who -- who have to deal with the mobile systems in everyday  
3 life, you're familiar with Apple and Samsung mobile phones.

4                   But Ericsson and Nokia, we are what Apple and  
5 Samsung are on mobile phones but on the infrastructure  
6 side.

7                   So everything that you need to -- to make  
8 telephony work, except the phones, Ericsson does.

9                   So it's networks. We design and develop networks.  
10 We manufacture networks and sell them to big operators  
11 throughout the world.

12                   And we also provide services related to this. We  
13 help the operators if they want to install and optimize the  
14 radio networks. And sometimes we also run the operator --  
15 the networks for the operators.

16 Q. Now, moving away from the era where we saw the  
17 beautiful wooden -- wooden phones of the 1800s, what are  
18 some examples of Ericsson's contributions to modern day  
19 communication technology out of that research and  
20 development division you mentioned?

21 A. Sure. So a couple of the milestones that can be worth  
22 mentioning is we made the first international phone call  
23 over an exchange in 1950. Before that, it was handled with  
24 manual help.

25                   And then in 1981, it was when we had the first 1st

1 generation mobile systems being deployed. We used a  
2 technology called NMT. The 1st generation radio system was  
3 voice centric, and it was analog, so it provided some basic  
4 capacity.

5 Q. And that's what we call 1G?

6 A. That is what we call 1G.

7           Then in 1991, we were first with the 2nd  
8 generation radio networks that we refer to as -- as GSM.  
9 That was a digital voice radio network that provided more  
10 capacity than the 1st generation.

11 Q. And that's what we call 2G?

12 A. That is what we call 2G.

13 Q. What comes next?

14 A. Then if we move on, in 2001, we -- we have to move on.

15 Q. I'm -- I'm trying, sir. Thank you.

16 A. In 2001, we made the first 3G call, so the first 3rd  
17 generation mobile system. What distinguished us from a 3rd  
18 generation system and a 2nd generation system is here you  
19 can run both voice and data, and we were first with that.

20           And then going on, we introduced the 4th  
21 generation mobile systems in 2009. And the first call was  
22 here in U.S. with an operator called Verizon.

23           And what characterizes the 4th generation mobile  
24 systems is high data rates. It's significantly better than  
25 the 3rd generation system.

1           And where we stand today is that in 2000 -- late  
2 2018, we actually started to -- to deploy the 5th  
3 generation mobile systems, both for Verizon and AT&T.

4           What characterizes the 5th generation mobile  
5 systems is that it's even higher data rates, but it's also  
6 aiming for man/machine communication and machine/machine  
7 communication. So it's very much what we call the Internet  
8 of Things.

9 Q. So, Mr. Norrby, when we talk about 1G, 2G, 3G, 4G, LTE,  
10 and soon to be 5G, we're talking about things that involve  
11 Ericsson's technology?

12 A. Yes. So we have been delivering mobile systems for  
13 40 years now.

14 Q. Now, you mentioned the first -- and we see up on the  
15 slide, the first 4G LTE call in 2009. Who was the first  
16 base station vendor to provide LTE equipment?

17 A. That was Ericsson, and it was towards Verizon as an  
18 operator.

19 Q. There's more to Ericsson than just research and  
20 development; is that right?

21 A. It certainly is. Although research and development is  
22 a very important part of -- of designing radio networks and  
23 phone networks, we have a significant manufacturing  
24 facilities to do this, and we have a large sales  
25 organizations to sell the networks to the operators, and we

1 have also large service operations where we provide  
2 services to the operators when they want to use them.

3 Q. Who are some of Ericsson's customers?

4 A. So we basically deliver to all major operators  
5 throughout the world. And to go into specifics, in the  
6 U.S. market, we deliver to Verizon, we deliver to AT&T, we  
7 deliver to T-Mobile, and we deliver to Sprint. We also  
8 deliver to a lot of the second tier operators in the U.S.

9 And going outside the U.S., we basically deliver  
10 to almost every single major operator on the planet.

11 So we start with some examples, KDDI and SoftBank  
12 in Japan, China Mobile in China, and in Europe, you have  
13 Vodafone, Deutsche Telekom, and France Telecom. And you  
14 have America Movil in Mexico for being -- just mentioning a  
15 few of the most significant operators.

16 Q. And I think I read somewhere that Ericsson actually has  
17 a presence on every continent; is that correct?

18 A. Yes, that -- that is actually correct. We even have  
19 deployed a radio network in Antarctica. And, well, the  
20 pictures of it is deceiving.

21 We don't provide network services to penguins;  
22 it's scientists working there.

23 Q. Mr. Norrby, if you could share with the jurors, who are  
24 the people or the employees behind Ericsson?

25 A. The people behind Ericsson are very much technology

1 oriented. It's a high-tech industry, and success from the  
2 past is not sufficient for us to go forward. We have to be  
3 on the toes of technology development, so we're very  
4 research and development oriented in our organization.  
5 Having the latest technologies helps having the cutting  
6 edge towards our competition.

7 Q. And can you give us a feel for what it's like to work  
8 at Ericsson from your own experience.

9 A. I think it's great fun to work in Ericsson, but you  
10 need to appreciate working in a highly international  
11 market. We operate in 180 countries. You have to like  
12 working with technology, and I really do that.

13 And many people like to work there for a long  
14 time. I've been working in Ericsson for some 22 years, and  
15 I'm probably below average in -- in my time in Ericsson.  
16 There have been many working more than I have.

17 And to give one final example is that people who  
18 have been working in Ericsson for 30 years, they get a  
19 special award.

20 Then you're invited to Stockholm City Hall for a  
21 big festive dinner with top management. And the fun thing  
22 with Stockholm City Hall is that that's the venue for the  
23 Nobel Prize. That is the big science prize in the world.

24 Q. So you've got about eight more years before you might  
25 be invited?

1 A. Yes. I can't wait.

2 Q. Mr. Norrby, why are patents important to Ericsson?

3 A. We put a lot of R&D efforts to develop our -- our  
4 networks.

5 We have some 24,000 engineers working in -- in  
6 R&D. And we've spent some 40 years making radio networks.  
7 So we have a significant stake in research and development.

8 So we patent our best ideas, and we have some  
9 45,000 patents. So we have a very strong patent portfolio.  
10 And the reason for why we patent is because we want to  
11 protect our ideas.

12 Q. Mr. Norrby, are you familiar with -- and we see one on  
13 the table here in front of me -- with the base stations  
14 being accused of infringement in this case?

15 A. Yes, I am. I've been working with that for a long  
16 time.

17 Q. Is that an RBS 6000 base station?

18 A. The items you see on the desk, they're our RBS 6000  
19 products.

20 Q. Okay. What is the RBS 6000 family of base stations?

21 A. RBS 6000 is our latest base station family. It is a  
22 family that is multi-standard, so you can run basically any  
23 technology on it. You can run 2G. You can run 3G. You  
24 can run 4G on it, and you can also run 5G on it by software  
25 upgrade.

1 Q. Now, you mentioned when we were going through the  
2 timeline of your work history at Ericsson that you were --  
3 you're a member of the original RBS 6000 team. Can you  
4 tell the jurors a little bit about that?

5 A. Yes, that's correct. When I started working in product  
6 management, I was working for the second generation base  
7 station family for GSM. And we had another product line in  
8 Ericsson working with the third generation technology,  
9 WCDMA, or RBS 3000.

10 And upper management, they were not happy to have  
11 two different base station families in the company. So  
12 they sent us away, a small group of people, and said do not  
13 come back until you have harmonized base stations within  
14 Ericsson.

15 So we were away outside Stockholm for a few days.  
16 And after that, we came back and had defined the RBS 6000  
17 family. And we were not many at that time. We were some  
18 10 to 15 persons. And you see some of the people working  
19 in that workshop. I'm in that picture, as well.

20 Q. And, now, this is the original team that came up with  
21 the RBS 6000. Has that team grown today?

22 A. It has grown significantly. Our team here, we defined  
23 the base station family on how to merge from 2000 to 3000  
24 products to RBS 6000. But then we rapidly expanded the --  
25 the development on this.

1                   So nowadays we are some 14,000 people working with  
2 base stations and -- and related to some software to  
3 that -- sorry.

4                   So since 2007, I made a rough estimate on how much  
5 work we've spent on RBS 6000. And it is somewhere around  
6 100,000 man years. Not man hours. Man years. So it's a  
7 significant effort we put into this.

8 Q. And what does RBS stand for, and what does it do?

9 A. RBS stands for radio base station. And a radio base  
10 station is a key component for building a radio network.  
11 You need a number of radio base stations to provide a radio  
12 network.

13 Q. Can you give the jurors an example of where they  
14 themselves might -- might see one of these base stations  
15 outside of the courtroom?

16 A. Sure. Normally, operators try to be fairly discreet  
17 on -- on where -- where they put the radio base stations.

18                   But if you just walk outside the court here and  
19 look to the left behind the Chase Manhattan Bank Building,  
20 you actually see a radio base station tower. And you see  
21 that on the picture here. And you see some big wide things  
22 on the tower. Those are the radio antennas. They don't  
23 seem to be very big, but they are somewhere between 10 to  
24 15 meters long.

25                   Behind these antennas, we mount radio equipment.

1 And then we have cables to -- to the ground.

2 And on the ground, we have the basic equipment to  
3 support the radio. So we have the digital units there, and  
4 we have the power and backup and transmission equipment  
5 there, as well, in a shelter.

6 Q. Does the RBS 6000 family function with LTE?

7 A. Yes, it does.

8 MS. SMITH: Your Honor, may I have permission to  
9 approach the witness with the base station on the table?

10 THE COURT: You may. Co-counsel -- or you can  
11 hand it to the Court Security Officer.

12 MR. KUBEHL: Yes, Your Honor.

13 Q. (By Ms. Smith) Okay. Mr. Norrby, let's take a look at  
14 the base station. Is this a -- is this an indoor or an  
15 outdoor model?

16 A. What we see here are components for an outdoor model  
17 base station.

18 Q. And how can you tell?

19 A. You see that with this -- that is a radio unit, and  
20 it's designed for being put in an outdoor environment.

21 This is what you put close to the antennas at the  
22 tower. And it works throughout the minus 32 plus 50  
23 degrees Centigrade, which is basically covering all the  
24 temperatures you can find on the planet.

25 Q. While you're up --

1                   MS. SMITH: With the Court's permission, if he  
2 could remain standing, Your Honor?

3                   THE COURT: He may.

4                   MS. SMITH: Thank you, Your Honor.

5 Q. (By Ms. Smith) If you could explain to the jury what  
6 the main component parts are of the base station?

7 A. Sure. There are two main components of a base station.  
8 And I would like to start with the digital unit, and it's  
9 this piece of equipment. This is basically a really  
10 capable computer that is specially designed for radio  
11 networks.

12                  And inside these, we have several very powerful  
13 processors designed by Ericsson. And if we were to compare  
14 it with a normal PC, this is about 40 times as powerful as  
15 a normal PC. So it's a massive computer -- computer power  
16 in this one.

17                  This one does all the intelligence in the radio  
18 network. So it handles all the -- the mobiles in -- at the  
19 base station.

20                  It decides if this base station or another base  
21 station -- sorry -- should handle the -- the mobile. It  
22 does all the traffic, and it handles all the mobiles  
23 connected to the base station.

24                  And it can be as much as 8,000 mobiles connected  
25 to this base station. So it's a lot of computing --

1 computing power.

2                   Then going forward -- so that was the intelligence  
3 in the base station.

4                   Then to speak with the mobiles, you need a radio  
5 unit. So this is doing all the talking to the mobiles and  
6 also all the listening.

7                   And this one is connected to the digital unit, and  
8 it's also connected to the antennas. So it can do all the  
9 conversation needed.

10                  And to give some reference on how flexible the  
11 products are, the digital units come in some five to 10  
12 different versions. But the radio units, they come in some  
13 200 different versions, depending on frequency and  
14 applications.

15                  So you can either run it in outdoor environment or  
16 indoor environment. We can also provide small indoor cells  
17 for airports and shopping malls, for instance. So it's a  
18 lot of different flavors of the equipment.

19 Q. Now, you can stay seated, sir.

20 A. Thank you.

21 Q. Now, are these base stations customizable?

22 A. Yes, they are. They're highly customizable. As I  
23 mentioned before, you have many different variance of  
24 these, so you can basically tailor it to every customer we  
25 can find.

1 Q. But what you showed us, those are just the basics?

2 A. These are just the basics. It's two key components of  
3 a base station.

4 Q. How long has Ericsson been making base stations?

5 A. We've been delivering base stations since 1981.

6 Q. And what is your experience with them?

7 A. I've been working with base stations ever since I  
8 started at Ericsson and also with the radio networks that  
9 we build with the base stations. So that's the core  
10 business of Ericsson.

11 Q. Is there anyone better at Ericsson -- than Ericsson at  
12 making base stations?

13 A. From my perspective, no. We were first on both 2G and  
14 3G and 4G, so I believe we are the best in the industry.

15 Q. Now, Mr. Norrby, you mentioned wireless standards  
16 earlier. What's a standard?

17 A. A standard is a set of rules that all players in the  
18 industry have to follow.

19 So if we talk of wireless standard, all the  
20 infrastructure players, the handset manufacturers have to  
21 follow the rules. There are some very good ideas behind  
22 having these rules.

23 You can compare it with power sockets in your  
24 households. It would be quite awkward if there were  
25 different power sockets with different voltages and

1 different frequencies wherever you go. So there's a clear  
2 benefit to have a standard.

3 So the standards we have, they set the rules for  
4 how networks shall be defined. They also set the rules for  
5 how networks shall talk with mobiles. And by doing so,  
6 operators can buy networks from any network vendor, and  
7 customers can buy mobiles from any mobile vendor, and  
8 customers can choose any operator they want.

9 And by doing so, we increase the market size, and  
10 that's good for the whole industry. And by also increasing  
11 the market size and having standards, we enable suppliers  
12 to be motivated to help us in doing products for us.

13 Q. Does Ericsson actively participate in the telecom  
14 standard setting organization?

15 A. Yes. We are a very active in the standardization and  
16 been in that for a long time. We have a lot of our  
17 sharpest engineers participating in the standards, and it's  
18 a big effort to put in there.

19 Q. And the jury's heard a lot about the 4G LTE standard.  
20 Was Ericsson involved in the development of the 4G LTE  
21 standards?

22 A. Yes, we were very active in the standardization of 4G.

23 Q. And you -- you said earlier that Ericsson was an active  
24 participant and very involved. What does that mean?

25 A. It involves being part of all the technical

1 specifications in the standard, both on -- on the  
2 infrastructure side and on the handset side, and driving  
3 the work -- the work on that, making sure that the standard  
4 becomes as good as possible, and you get the major  
5 improvement from the previous standard. And we played a  
6 very active role that would -- with our best ideas.

7 Q. Now, you said earlier that Ericsson had been awarded  
8 how many patents?

9 A. We have, in total, some 45,000 patents, and almost all  
10 of them were related to networks.

11 Q. Does Ericsson respect the patent rights of others?

12 A. Yes, we do. We -- we pay a lot of R&D efforts to  
13 design our products, and we patent our best ideas to  
14 protect our rights. And it goes both ways. We respect  
15 other organization's patents.

16 Q. By coming into court and defending itself, does it mean  
17 that Ericsson has no respect for patents?

18 A. Absolutely not. We -- we pay a lot of attention to  
19 patents, and we have extensive cross-licensing with all the  
20 major network providers and all the major handset  
21 providers.

22 MS. SMITH: I'll pass the witness.

23 THE COURT: All right. Cross-examination by the  
24 Plaintiff.

25 MS. FAIR: Yes, Your Honor.

1                   THE COURT: You may proceed with cross-examination  
2 when you're ready, Ms. Fair.

3                   MS. FAIR: Thank you, Your Honor.

4                   CROSS-EXAMINATION

5 BY MS. FAIR:

6 Q. Good morning, Mr. Norrby.

7 A. Good morning.

8 Q. I understand English isn't your first language, and I  
9 have a tendency sometimes to speak quickly and jumble my  
10 words. So let me know if you don't understand my  
11 questions, please.

12 A. Sure. Please speak slowly.

13 Q. Yes, sir. I'll do my best.

14 A. Yes.

15                   THE COURT: Good suggestion.

16 Q. (By Ms. Fair) Mr. Norrby, you just told this jury that  
17 the base stations that Ericsson provides are highly  
18 customizable, right?

19 A. That is correct.

20 Q. It's not just something that you go buy off the shelf  
21 and it's a one size fits all, right?

22 A. That is correct.

23 Q. And so the -- the customer, like T-Mobile, they specify  
24 their configuration when they're placing an order, right?

25 A. That is correct.

1 Q. They work with Ericsson, you work together, and you  
2 figure out what's the right customized product for the use  
3 of the carrier, right?

4 A. That is correct.

5 Q. You pick the number -- the customer picks the number of  
6 radio units?

7 A. They pick the number of radio units, which types of  
8 radio units, which digital units, and what software to run  
9 on the base station.

10 Q. And they choose how to -- the hardware activation for  
11 them?

12 A. Yes, they do.

13 Q. And that's talking about connected users, the  
14 throughput of the unit, right?

15 A. That is correct.

16 Q. They pick the power options?

17 A. That is correct.

18 Q. So it's not really true that -- that the carrier is  
19 just somebody who picks a random product off the shelf,  
20 like I might go pick a laptop out at Walmart, right?

21 A. That is correct.

22 Q. Now, Mr. Norrby, Ericsson has told this jury that  
23 they're here to stand behind their product, right?

24 A. That is correct.

25 Q. And we heard questions and testimony about, well, if

1 somebody's product goes wrong, you'd expect the person who  
2 provided that product to stand up for it, right?

3 A. Yes.

4 Q. Well, you understand that this case isn't about a  
5 product malfunctioning, right?

6 A. Correct.

7 Q. This case is about patent infringement, right?

8 A. That is correct.

9 Q. And Mr. McGrath explained to us that a method claim is  
10 about a process, right?

11 A. That is correct.

12 Q. And that's the type of claims that are at issue in this  
13 case, right?

14 A. Yes.

15 Q. It's not a claim specifically on the product itself.

16 A. Yes.

17 Q. It's how it's used.

18 A. Yes.

19 Q. And T-Mobile is the one that -- that executes those  
20 processes; they use the product?

21 A. Yes.

22 Q. So we can't say that if a drilling bit breaks or goes  
23 wrong, that really Halliburton should be standing up here,  
24 right? I mean, this is about Exxon pulling the oil and gas  
25 using the drilling bit, right?

1 A. Well, we have designed the product so we have a  
2 significant responsibility to them.

3 Q. As does T-Mobile, right? As we just talked about, all  
4 the different things that they customize.

5 A. Yes.

6 Q. And their decision on what to turn on and what not to  
7 turn on.

8 A. Yes.

9 Q. They are the ones that actually use the process that's  
10 accused in this case.

11 A. Yes.

12 Q. I want to shift gears a little bit.

13 We've heard about the Turina patent in this trial,  
14 right?

15 A. Yes.

16 Q. Do you know Mr. Dalibor Turina?

17 A. No, I don't know him.

18 Q. Do you know if he's employed by Ericsson currently?

19 A. I don't know.

20 Q. So you don't know if he's the director of patent  
21 portfolio management?

22 A. I can't answer that.

23 Q. Do you understand that Ericsson is telling this jury  
24 that Mr. Turina's patent is one of the reasons that  
25 Dr. Jorgensen's patents should be torn up and thrown away,

1 right?

2 A. Yes.

3 Q. And Mr. Turina isn't going to come and tell this jury  
4 about his invention, is he?

5 A. That is correct.

6 Q. We've heard a lot this week about Ericsson's being an  
7 inventive company, right?

8 A. Yes.

9 Q. Seems like Ericsson's worked really hard to show this  
10 jury how much they've invented over the last 40 years,  
11 right?

12 A. Well, that's the truth.

13 Q. Right. You were involved in 1G and 2G?

14 A. And 3G and 4G and 5G.

15 Q. And we even heard about some awards from the European  
16 Patent Office, right?

17 A. Yes.

18 Q. I mean, you know, IV has awards from the U.S. Patent  
19 Office, right?

20 A. Yes. You have a lot of patents.

21 Q. You know they've won an award as well, right?

22 A. I was not aware of that, but I hold that very likely.

23 Q. I mean, being an inventive company doesn't mean  
24 Ericsson's invented everything, right?

25 A. No. I haven't said that.

1 Q. You haven't cornered the market on good ideas?

2 A. No, we have not.

3 Q. Even the standards themselves that we've been talking  
4 about, Ericsson wasn't the only company involved in those,  
5 right?

6 A. No. Doing standardization is a large teamwork with all  
7 the network providers and the major handset manufacturers  
8 and some major operators. So it's a major teamwork to do  
9 standards.

10 Q. And it takes a long time to come up with the best way  
11 to do things, right?

12 A. Yes.

13 Q. And that's what you try to do with the standards.

14 A. Yes.

15 Q. You try to implement the best technology you can.

16 A. Yes.

17 Q. And you think that's what VoLTE is, right?

18 A. VoLTE is our key component.

19 Q. And Ericsson uses LTE and VoLTE even though some of the  
20 ideas in that may have come from other people, right?

21 A. Yes.

22 Q. And so the fact that Ericsson has a bunch of other  
23 patents and has some awards for being an inventive company,  
24 that doesn't mean that Dr. Jorgensen didn't invent  
25 anything, right?

1 A. That is correct.

2 Q. You don't get a free pass to trespass just because you  
3 own some of your own property, right?

4 A. Absolutely.

5 Q. We can agree, then, that if this jury decides that  
6 Ericsson and T-Mobile are infringing, that they should pay  
7 for that use, right?

8 A. Yes.

9 Q. Because patents have value, right?

10 A. They certainly have.

11 Q. They're property rights, and they should be respected?

12 A. Yes.

13 MS. FAIR: I'll pass the witness, Your Honor.

14 THE COURT: Redirect, Ms. Smith?

15 MS. SMITH: Briefly, Your Honor.

16 REDIRECT EXAMINATION

17 BY MS. SMITH:

18 Q. Mr. Norrby, you absolutely agreed with Ms. Fair when  
19 she said, base stations are not one size fits all, didn't  
20 you?

21 A. That is correct.

22 Q. And Ericsson base stations are not the same as Samsung  
23 and Nokia base stations?

24 A. That is correct.

25 Q. And Plaintiff can't go to the base station-getting

1 store and buy a Nokia base station and assumes it works  
2 like an Ericsson base station, can it?

3 A. That's correct, they are very different.

4 Q. But Plaintiff sued Ericsson, didn't it?

5 A. Yes.

6 MS. SMITH: Thank you, Your Honor.

7 THE COURT: Further cross, Ms. Fair?

8 MS. FAIR: Yes, Your Honor, briefly.

9 RECROSS-EXAMINATION

10 BY MS. FAIR:

11 Q. AT&T buys Ericsson's base stations, right?

12 A. Yes.

13 Q. As does Verizon?

14 A. Yes.

15 MS. FAIR: I'll pass the witness, Your Honor.

16 THE COURT: Redirect?

17 MS. SMITH: No, Your Honor.

18 THE COURT: All right. You may step down,

19 Mr. Norrby.

20 THE WITNESS: Thank you.

21 THE COURT: Mr. Johnston, let's also get that  
22 other demonstrative device, and return it back to the  
23 Defendants, so we can clear the table.

24 All right. Defendants, call your next witness.

25 MR. KUBEHL: Plaintiffs call Christian Skarby.

1                   THE COURT: All right. If you'll bring the  
2 witness in so that he can be sworn.

3                   If you'll come forward, sir, the courtroom deputy  
4 in front of me will administer the oath to you. Over here.

5                   (Witness sworn.)

6                   THE COURT: Now, if you'll come around where you  
7 were, have a seat over here on the witness stand.

8                   MR. KUBEHL: Your Honor, for placement of the  
9 easel, would Your Honor prefer it to be out here?

10                  THE COURT: Probably in front of the podium.  
11 That's about right.

12                  MR. KUBEHL: Mr. Skarby, can you see this?

13                  THE WITNESS: I can.

14                  THE COURT: Who's going to cross-examine this  
15 witness?

16                  MR. FLANNERY: I am, Your Honor.

17                  THE COURT: All right. Can you see the easel from  
18 where you're seated?

19                  MR. FLANNERY: I can see the easel, but I'm going  
20 to wait to see when he puts the board on there.

21                  I can see it, Your Honor.

22                  THE COURT: All right. Then let's --

23                  MR. KUBEHL: I think you've got a pointer up  
24 there.

25                  THE WITNESS: Is it one of these?

1           THE COURT: No, it's by the -- it's by the --

2           THE WITNESS: Yes, it looks like a pen.

3           THE COURT: Turn it the other way.

4           THE WITNESS: Thank you, Your Honor.

5           THE COURT: All right. Defendants, you may  
6 proceed with direct examination of this witness.

7           MR. KUBEHL: Thank you, Your Honor.

8           CHRISTIAN SKARBY, DEFENDANTS' WITNESS, SWORN

9           DIRECT EXAMINATION

10          BY MR. KUBEHL:

11          Q. Mr. Skarby, could you please introduce yourself to the  
12         jury?

13          A. Hi. My name is Christian Skarby.

14          Q. Where do you live, Mr. Skarby?

15          A. I live in Stockholm, Sweden.

16          Q. Do you have a family there?

17          A. Yes, I have a wife and a five-year-old son.

18          Q. Who do you work for?

19          A. I work for Ericsson.

20          Q. And what do you do at Ericsson?

21          A. I'm an expert in radio resource management.

22          Q. Is that your title -- you said expert in radio resource  
23         management. Is that an official title at Ericsson?

24          A. Yes, it is.

25          Q. Okay. And you're not -- you're not here to give expert

1 testimony. You're going to give factual testimony about  
2 the way the base station works?

3 A. Yes. Expert is my title at Ericsson.

4 Q. Okay. What does it -- what does it take to be an  
5 expert in radio resource management at Ericsson?

6 A. It's a quite involved process, but it involves senior  
7 management identifying that there's a strategic need to  
8 have an expert in that area.

9 It also requires that senior management identifies  
10 and acknowledges a candidate that has the required set of  
11 skills, the required contacts, is visible enough in the  
12 organization to actually be, you know, worthy of such a  
13 position.

14 Q. So I want to take a step back to sort of know how you  
15 got to be an expert. First of all, where did you grow up?

16 A. I grew up in Stockholm, Sweden, as well.

17 Q. Okay. And is English your first language?

18 A. No.

19 Q. How did you learn English?

20 A. I mean, we learn English in school, starting at 4  
21 grade -- 4th grade.

22 Q. Okay.

23 THE COURT: Mr. Kubehl, you need to remove the  
24 demonstrative until you're ready to question the witness  
25 about it, and then put it up on the easel.

1 MR. KUBEHL: Yes, Your Honor.

2 THE COURT: Thank you. Proceed, please.

3 MR. KUBEHL: Thank you, Your Honor.

4 Q. (By Mr. Kubehl) So how long have you been at Ericsson?

5 A. I've been there for -- since 2005 now, so maybe 13  
6 years, 14.

7 Q. And how long have you been around wireless networking,  
8 generally?

9 A. It's hard to say. My father was also wireless engineer  
10 working for Ericsson, so I got kind of exposed to it  
11 through him, I guess. I also used to work for Ericsson in  
12 a laboratory during the summers when I was in high school.

13 Q. Did you earn a degree?

14 A. Yes, I earned a Master's degree.

15 Q. And what was that in?

16 A. In electrical engineering with a direction toward  
17 signal processing and systems.

18 Q. What kind of work were you doing when you started at  
19 Ericsson in 2005?

20 A. At that time, I was working doing signal processing for  
21 the uplink for the 3G, for third generation, the one that  
22 came before 4G or LTE.

23 Q. Okay. What was your next project?

24 A. After that, in 2007, I moved on to do radio resource  
25 management for LTE.

1 Q. What does LTE stand for?

2 A. It stands for long-term evolution.

3 Q. And what does the -- the evolution mean in that -- in  
4 the phrase?

5 A. It's basically the evolution of the wireless  
6 technology.

7 Q. And so when you started working on LTE in 2007 at --  
8 you know, what was going on in the industry as far as LTE  
9 goes?

10 A. LTE was about to be standardized -- the first version  
11 of the technology sort of being standardized. Companies  
12 agreeing on, you know, how shall things work, what shall --  
13 I mean, their interface, what does the UE do, and so on.

14 Q. So you just said UE. What are you referring to?

15 A. Yes, it's not --

16 Q. Slow down a little bit.

17 A. Thank you. UE means user equipment. And that is  
18 basically the mobile phone. It's the 3GPP name of it. I'm  
19 so used to saying it, it slips out of my mind without --

20 Q. Okay. So UE is the same as the mobile phone?

21 A. Yes.

22 Q. Okay. So tell us when you then got involved -- when  
23 LTE was just sort of getting its roots, what were you doing  
24 at Ericsson, what kind of work on LTE were you doing?

25 A. As I said, I was working with radio resource management

1 at that time. And, in particular, I was doing the initial  
2 specifications for the software for the schedulers.

3 Q. Let's take one step back. Radio resource management,  
4 can you help the jury understand what you mean by that?

5 A. Yeah. I will try.

6 So the base station is responsible for handling  
7 the transmissions over the air, and it needs to access  
8 certain resources.

9 So an example of a resource, that could be  
10 transmit power. You determine how much transmit power you  
11 should use when you transmit.

12 You also have the frequencies that you can use to  
13 transmit. Those are all resources and can determine which  
14 frequent -- which frequencies are used when you make a  
15 transmission. That is all part of radio resource  
16 management.

17 Q. You mentioned the schedulers. What -- what work on the  
18 Ericsson schedulers have you done?

19 A. As I tried to say before, I was involved in writing the  
20 initial software specifications -- specifications telling  
21 you how do you do this part, how do you do this step of  
22 scheduling, so how -- how do you make this happen? And I  
23 also worked with them for -- basically since then.

24 Q. And give us a time frame when you started working on  
25 that, when -- that was when?

1 A. That was in the time frame of 2007 to 2009.

2 Q. So starting from there and coming up to where we  
3 are now in the base station that we've seen in the  
4 courtroom here, tell us what kind of effort has gone  
5 into -- at least on the scheduling functionality that  
6 you've worked on, what kind of effort has gone into  
7 that?

8 A. I can try to explain a little bit how it has come to be  
9 and how we work, but it's not really a formal process. So  
10 it's a bit hard to describe. But it involves a research  
11 department.

12           They're doing the standardization. They  
13 understand how the technology works, but they also  
14 investigate things, you know, how can this work, can we do  
15 this in a certain way, versus little schemes and  
16 algorithms, how to solve the different problems that  
17 appear.

18           And we take their input, see, you know, how -- how  
19 can we solve certain problems. We also talk to customers  
20 and our project management and get requirements from the  
21 customers.

22           The customers might say, we want a knob to tune  
23 this part of how the performance works, or we want you to  
24 implement the standard in this way because that would help  
25 us fulfill our needs.

1           We try to, in the team, brainstorm about this,  
2 think about pick and choose, you know, how do we put all of  
3 this together in one piece of software. And those  
4 thoughts, they are kind of materialized into this software  
5 specification I was talking about.

6           We hand this specification over to our design  
7 department. We help them understand that, because the  
8 design department, they're the ones doing the coding of the  
9 software.

10           They might discuss with us also maybe we can  
11 improve the spec, maybe we can make it a little bit better  
12 given their knowledge of the hardware and software and --  
13 yeah -- generally support throughout the process.

14 Q. As far as the way the --

15           THE COURT: Mr. Kubehl, I'm going to ask  
16 Mr. Skarby to try and slow down a little bit with your  
17 answers.

18           THE WITNESS: Thank you, Your Honor.

19           THE COURT: And, Mr. Kubehl, given that this is a  
20 fact witness, you don't need and shouldn't ask for  
21 questions that call for a lengthy narrative. You need to  
22 ask precise questions.

23           MR. KUBEHL: Yes, Your Honor.

24           THE COURT: Let's proceed.

25 Q. (By Mr. Kubehl) So, Mr. Skarby, just to finish up your

1 background, have you been awarded any United States  
2 patents?

3 A. Yes. I think I have 21 United States patents.

4 Q. And do they relate to the scheduling functionality that  
5 we'll be talking about?

6 A. Most of them do.

7 Q. So in your job, with the title at Ericsson, expert in  
8 radio resource management, do people at Ericsson look to  
9 you for guidance on how to solve the technology problems in  
10 that area?

11 A. Yes. That is part of the sort of job description for  
12 an expert.

13 Q. Okay.

14 MR. KUBEHL: With permission, I'd like to put the  
15 exhibit on the easel?

16 THE COURT: You may put the demonstrative on the  
17 easel.

18 Q. (By Mr. Kubehl) Mr. Skarby, have you created this  
19 drawing to help the jury understand some of the concepts  
20 you'll be talking about today?

21 A. Yes.

22 Q. Show us -- if you can reach the pointer, could you  
23 please show the jury the part of the drawing that you work  
24 on.

25 A. That would be -- let's see if I can hit it. There.

1 The base station here.

2 Q. And what does the base station do?

3 A. The base station is the one that transmits to the  
4 mobile phone and receives transmissions from the mobile  
5 phone.

6 Q. Okay. And the mobile phone is where?

7 A. That would be this pad-looking thing over here.

8 Q. Okay. And that's a wireless communication to the  
9 phone?

10 A. Yes. The base station communicates wirelessly to the  
11 mobile phone.

12 Q. So you've -- you've got the mobile phone on one side  
13 communicating wirelessly, and then what else does the base  
14 station communicate with?

15 A. On the other end -- sorry -- over here, you have the  
16 core network to which the base station communicates to the  
17 Internet, which has the contents that its purpose is to  
18 deliver to the phone.

19 MR. KUBEHL: Your Honor, would it be all right if  
20 I stood next to the easel so I could point to something?

21 THE COURT: As long as you speak up and as long as  
22 you don't get hit with the laser.

23 MR. KUBEHL: Thank you.

24 THE WITNESS: I'll be careful.

25 Q. (By Mr. Kubehl) All right. So you've got labeled

1 uplink and downlink here. Can you tell us about that.

2 A. Yes.

3 Uplink, that is the blue arrow here, that refers  
4 to direction of transmission. So when the mobile phone is  
5 transmitting to the base station, that is transmitting in  
6 the uplink direction.

7 And the pink arrow here, that represents the  
8 downlink direction, which is then the opposite direction.  
9 So when the base station is transmitting to the mobile  
10 phone, that means that they're transmitting in the  
11 downlink.

12 Q. You've got labeled within the base station these two  
13 blocks, uplink scheduler and downlink scheduler. Is that  
14 all the base station does, is just have a scheduler?

15 A. No. It's not really all it does.

16 Q. Okay. Is that what you work on, the scheduler part?

17 A. Yes. That's what I've been working most of my career  
18 at Ericsson with.

19 Q. Okay. Please explain what you're showing here with the  
20 uplink scheduler and then the separate downlink scheduler.

21 A. So the uplink scheduler, that represents in this  
22 picture the functionality within the base station that  
23 decides which phone gets to transmit on what resources in  
24 the uplink direction.

25 The downlink scheduler, conversely, it's a

1 separate set of functionality that decides to which phone  
2 the base station shall transmit on using what resources.

3 Q. You've got some color coordination here between your  
4 schedulers, and then down here you've got downlink  
5 frequencies and uplink frequencies labeled. Let me start  
6 with the uplink scheduler.

7 What's the pool of resources that are available to  
8 the uplink scheduler to do its scheduling?

9 MR. FLANNERY: Your Honor, I have an objection.  
10 May we approach?

11 THE COURT: Approach the bench.

12 (Bench conference.)

13 MR. FLANNERY: Your Honor, I believe it would be  
14 appropriate --

15 THE COURT: All right. Go ahead.

16 MR. FLANNERY: I believe it would be appropriate  
17 with this witness to do a general description of the  
18 technology, but we're about to do a deep dive into this  
19 technology with a fact witness.

20 I think this would be more appropriate with an  
21 expert. We're going to spend a lot of time going through  
22 the details of how it works, and I suppose they're going to  
23 come back and do it all over again with Dr. Wicker.

24 MR. KUBEHL: We do not plan to be repetitive  
25 between Dr. Wicker and Mr. Skarby, but he needs to explain

1 the technology he's working on so the jury can understand  
2 the context of his testimony.

3 MR. FLANNERY: Well, his testimony is fact  
4 testimony. He's going to go through the gory details of  
5 how this all works.

6 THE COURT: Well, that's a matter of degree,  
7 Mr. Flannery, and I agree he's entitled to give a  
8 reasonable overview of the technology. But he's not an  
9 expert, and he's not going to give an expert analysis of  
10 everything.

11 And at this point, I'm going to let him continue.  
12 You certainly have the right to reurge this objection.

13 Also, when we were in chambers, there was a  
14 discussion about the fact that having to come to the bench  
15 repetitively puts the Plaintiffs in a bad light.

16 With regard to whether this is an expert -- excuse  
17 me -- with regard to this is a question or an examination  
18 by the Defendant properly addressed to a fact witness or an  
19 expert witness, I'll hear those objections from the floor  
20 and rule on them so that the jury is not in the dark as to  
21 what we're doing up here.

22 MR. FLANNERY: Thank you, Your Honor.

23 THE COURT: Okay?

24 MR. FLANNERY: Thank you, Your Honor.

25 THE COURT: Let's continue.

1 (Bench conference concluded.)

2 THE COURT: Let's continue.

3 Q. (By Mr. Kubehl) Mr. Skarby, can you explain to us,  
4 this uplink scheduler that you've got shown here, what --  
5 what is the pool of -- of bandwidth that the uplink  
6 scheduler has available to it?

7 A. So the uplink scheduler, it deals with some frequencies  
8 that are asserted or dedicated for uplink transmissions, as  
9 you see here in the bottom of the screen.

10 See if I can point to this again. There you go.

11 | Sorry about that. A little bit too much caffeine.

12 Q. And how about the downlink scheduler? What are --

13 what's the bandwidth available to the downlink scheduler?

14 A. So the downlink scheduler uses a separate range of  
15 frequencies that are distinct from the uplink frequencies  
16 which are only managed by the downlink scheduler.

17 Q. So the -- the uplink scheduler that you -- that you  
18 work on at Ericsson, does that have any access to the  
19 downlink bandwidth?

20 A. No.

21 Q. Does the downlink scheduler have any access to the  
22 uplink bandwidth?

23 | A. No.

24 Q. You're showing white space in between the downlink the  
25 uplink frequencies. Why is that?

1 A. There is a guard band between them so they don't  
2 interfere with each others. Because these boxes, they look  
3 really nice and confined, but the reality, a little bit of  
4 the energy leaks outside of them.

5 So they need to be quite far apart so that they  
6 don't interfere the uplink and the downlink and vice versa.  
7 That will harm the transmission so that they cannot be  
8 received.

9 Q. So when -- when that phone needs to make a transmission  
10 to the base station, what bandwidth will the uplink  
11 scheduler use for that?

12 A. So when the phone is transmitting in the uplink  
13 direction, it is transmitting using the uplink frequencies.

14 Q. And then if the base station needs to transmit in the  
15 downlink, what bandwidth will the downlink scheduler use  
16 for that?

17 A. In that case, it will use the downlink frequencies.

18 Q. Thank you.

19 MR. KUBEHL: Your Honor, I can remove this.

20 THE COURT: All right. If you will, and return  
21 the easel to its earlier position, please.

22 MR. KUBEHL: I do -- I do --

23 THE COURT: When you have more --

24 MR. KUBEHL: -- have one more poster board.

25 THE COURT: That's fine. Then leave it.

1 Q. (By Mr. Kubehl) And so why -- why -- why do --  
2 withdrawn.

3 Why does the Ericsson base station use separate  
4 bandwidths for uplink and downlink transmissions in a -- in  
5 a network like T-Mobile?

6 A. So that comes from the 3GPP specification. It's the  
7 standard of LTE. It tells you which frequencies can you  
8 use for downlink and which frequencies can you use for  
9 uplink transmissions.

10 And those specifications, they are, in turn,  
11 written due to, you know, laws or -- or regulatory  
12 agencies, determining in each individual country what can  
13 be transmitted in what frequencies.

14 So, for example, in the U.S., there is an agency  
15 that says --

16 THE COURT: Mr. Skarby -- Mr. Skarby, he didn't  
17 ask you about agencies or laws or regulations. He asked  
18 you a question that you've already answered. You need to  
19 limit your answers to the questions that are asked, okay?

20 THE WITNESS: Thank you, Your Honor. Sorry.

21 THE COURT: That's all right.

22 Continue, counsel.

23 MR. KUBEHL: Thank you, Your Honor.

24 Q. (By Mr. Kubehl) In the United States, are there any  
25 regulations that prevent a network like T-Mobile's from

1 using the same bandwidth for uplink and downlink?

2 MR. FLANNERY: Objection, Your Honor. We're  
3 getting into areas of expert testimony.

4 THE COURT: I'll sustain that. It also appears to  
5 be getting very close to looking for legal conclusions as  
6 to applicable laws and regulations. I'll sustain the  
7 objection.

8 MR. KUBEHL: Thank you, Your Honor. May I  
9 proceed?

10 THE COURT: You may proceed.

11 MR. KUBEHL: Thank you.

12 Q. (By Mr. Kubehl) I want to talk more about the uplink  
13 scheduler that you helped design. How many phones  
14 typically are trying to talk to the base station in  
15 T-Mobile's network at the same time?

16 A. That can be up to hundreds, maybe even thousands in  
17 extreme cases.

18 Q. And does the Ericsson base station have enough  
19 bandwidth available to it -- if we're just talking about  
20 one Ericsson base station in T-Mobile's network, does that  
21 base station have enough bandwidth to be able to always  
22 serve every single phone that wants to talk at the same  
23 time?

24 A. In the general case, no.

25 Q. So how does the uplink scheduler decide which phone

1 gets to transmit at a particular time?

2 MR. FLANNERY: Objection, Your Honor. We're  
3 getting into expert testimony again.

4 THE COURT: I -- I sustain that.

5 Q. (By Mr. Kubehl) Did you design the uplink scheduler  
6 for the Ericsson base station?

7 A. Yes, I was part of that.

8 Q. And in -- in the Ericsson base station that -- in  
9 the -- in the uplink scheduler that you designed for the  
10 Ericsson base station, how did you design it to make a  
11 decision as far as which phone gets which -- which turn?

12 A. We designed it so that in every time slot, there will  
13 be a scheduling competition. The base station's  
14 representation of each phone will compute a scheduling  
15 metric that tells how important is this particular phone  
16 right now.

17 It ranks them according to this metric and takes  
18 the ones that have the highest metric.

19 So one phone might have a 5 as a metric, another  
20 one could have 10, and then the one that has 10 is more  
21 important than the one has a 5 and will be selected before.

22 Q. How often --

23 MR. FLANNERY: Objection, Your Honor. That was  
24 expert testimony. We move to strike.

25 THE COURT: Well, the answer has already been

1 given, Mr. Flannery. I think the objection is untimely.  
2 I'll overrule your objection.

3                   But I'll remind Defendants' counsel, this is a  
4 fact witness. He is not designated as an expert, and he's  
5 not entitled to offer analytical opinions or opinions that  
6 would be typically given by an expert who's been so  
7 designated.

8                   Let's continue on that basis.

9 Q. (By Mr. Kubehl) Mr. Skarby, how often did you design  
10 your uplink scheduler to make the scheduling competition  
11 decisions?

12                   MR. FLANNERY: Objection, Your Honor. This is  
13 going into expert testimony again.

14                   THE COURT: I'll sustain it.

15                   How -- how the scheduler makes the scheduling  
16 competition decisions is certainly beyond a mere factual  
17 inquiry.

18 Q. (By Mr. Kubehl) Mr. Skarby, were you personally  
19 involved in designing the uplink scheduler for the Ericsson  
20 base station?

21 A. Yes, I was.

22 Q. Do you have personal knowledge of how it works?

23 A. I do.

24 Q. Do you have personal knowledge of how often it makes  
25 scheduling decisions?

1 A. I have.

2 Q. How often does the Ericsson base station and the uplink  
3 scheduler make a scheduling decision?

4 MR. FLANNERY: Object, Your Honor. We're getting  
5 into expert testimony.

6 THE COURT: I'll allow this question. Overruled.

7 A. So the uplink scheduler makes a thousand such  
8 scheduling decisions or scheduling competitions every  
9 second, so once every millisecond.

10 MR. KUBEHL: Could I have Slide 4, please?

11 Q. (By Mr. Kubehl) In your -- in your work at Ericsson,  
12 do you work with concepts called transmission frames?

13 A. Yes.

14 Q. And do you work with concepts called TTI's?

15 A. Yes.

16 Q. What is a TTI?

17 A. It stands for transmission time interval.

18 Q. What's the relationship between a transmission frame  
19 that you work with and a TTI?

20 A. So there are 10 TTI's within one frame.

21 Q. What are you -- what are we showing on this figure?

22 A. This looks like a schematic of the LTE frame with the  
23 TTI's drawn out there as the smaller boxes.

24 Q. I think if you touch the screen, it will make a mark.  
25 Can you identify one of these frames for us?

1 A. Let me try this -- this -- whoops, I need to push  
2 harder. There we go.

3 Q. And what's the red box in the frame?

4 A. I think the red box is pointing towards a current TTI,  
5 the one for which the scheduling competition is being held  
6 at the moment.

7 Q. So in the -- in the base stations that you work on in  
8 Ericsson that use these transmission frames, do the  
9 transmission frames repeat one after another?

10 A. Yes. They flow in time as a -- you know, just taking  
11 the seconds, it could take frames, as well, in the base  
12 station.

13 Q. And so what are you -- what are you showing with  
14 respect to the rows below the one you circled?

15 A. Those will be future frames.

16 Q. In the uplink scheduler that you designed for Ericsson,  
17 which of the frames does it schedule?

18 MR. FLANNERY: Object, Your Honor. We're getting  
19 into expert testimony again.

20 THE COURT: Sustained.

21 Q. (By Mr. Kubehl) Do you have personal knowledge of  
22 which transmission frame is operated on by the uplink  
23 scheduler that you designed?

24 MR. FLANNERY: Same objection, Your Honor. It  
25 doesn't matter. He's still getting into expert testimony.

1                   THE COURT: That's -- that's sustained. Whether  
2 he knows about it or not doesn't change the character of  
3 the testimony, counsel.

4                   MR. KUBEHL: We can take this down.

5 Q. (By Mr. Kubehl) So going back to the -- the scheduler  
6 that you designed, you talked about the priority values  
7 that you give to phones to help decide who wins the  
8 competition. Do you recall that?

9 A. Yes.

10 Q. Did you design something called a delay base scheduler?

11 A. Yes, we did.

12 Q. And can you tell me how those priority values work in  
13 the delay base scheduler that you designed?

14                   MR. FLANNERY: Objection, Your Honor. Getting  
15 into expert testimony again.

16                   THE COURT: Sustained.

17 Q. (By Mr. Kubehl) Mr. Skarby, what is the general  
18 concept of the delay base scheduler that you designed?

19                   MR. FLANNERY: Objection, Your Honor. We're  
20 getting into expert testimony again.

21                   THE COURT: Sustained.

22                   MR. KUBEHL: Could I have DX-282, please?

23 Q. (By Mr. Kubehl) Dr. -- or, Mr. Skarby, have you seen  
24 this document before?

25 A. Yes.

1 Q. What is this document?

2 A. This is an internal Ericsson document describing high  
3 level of -- overview of a feature that relates to the delay  
4 base scheduler.

5 Q. What's the feature called?

6 A. Battery saving for DBS-SABE.

7 Q. And is this a feature that you personally worked on?

8 A. I think I personally reviewed the work that was done  
9 here.

10 Q. And do you understand how that feature works?

11 A. Yes, I do.

12 MR. KUBEHL: Could we have Page 10, please?

13 Q. (By Mr. Kubehl) Under Solution, what does it mean when  
14 it says "no resource allocation for future TTI's"?

15 MR. FLANNERY: Objection, Your Honor. We're  
16 getting into expert testimony again.

17 THE COURT: Sustained.

18 Q. (By Mr. Kubehl) Mr. Skarby, do you have personal  
19 knowledge of what that means?

20 MR. FLANNERY: Again, Your Honor, it doesn't  
21 matter. We're getting into expert testimony again.

22 THE COURT: Well, asking him whether he has  
23 personal knowledge or not does not call for expert  
24 testimony. He can answer that question.

25 MR. FLANNERY: Okay. Thank you, Your Honor.

1                   THE COURT: Overruled.

2 A. Yes, I have.

3 Q. (By Mr. Kubehl) When you designed the Ericsson uplink  
4 scheduler, did you think it was a good idea or a bad idea  
5 to do resource allocation for future TTI's?

6                   MR. FLANNERY: Objection, Your Honor, we're  
7 getting into expert testimony again.

8                   THE COURT: I'll sustain that.

9                   I understand the way the question's worded, but  
10 it's all pointed in the same direction, counsel.

11                  Sustained.

12 Q. (By Mr. Kubehl) Did you make any design choices in  
13 designing the DBS-SABE feature with respect to whether it  
14 should allocate for future TTI's?

15                  MR. FLANNERY: Same objection, Your Honor. We're  
16 getting into expert testimony.

17                  THE COURT: I'll allow this question. Overruled.

18 A. Could you repeat the question?

19 Q. (By Mr. Kubehl) Did you make any design choices in  
20 designing the DBS-SABE feature with respect to whether it  
21 should use allocation for future TTI's?

22 A. We decided against using that.

23 Q. Why?

24                  MR. FLANNERY: Objection, Your Honor. This is  
25 going to go into expert testimony.

1                   THE COURT: I sustain.

2 Q. (By Mr. Kubehl) In your work at Ericsson, have you  
3 personally identified any technical problems with  
4 allocating for future TTI's?

5                   MR. FLANNERY: Objection, Your Honor. May we  
6 approach?

7                   THE COURT: Approach the bench.

8                   (Bench conference.)

9                   MR. FLANNERY: Your Honor, this is expert  
10 testimony. He can -- and I have to keep doing this over  
11 and over again. I mean, I'm happy to do it, but it gets to  
12 the point where it looks like I'm obstructing the --

13                  THE COURT: Let me ask this question. What is it  
14 that you think you can ask this witness that's not expert  
15 testimony that you haven't already asked him?

16                  MR. KUBEHL: I think his personal knowledge, being  
17 the person who has designed this, to talk about how he  
18 designed it, how it works, how he knows it works through  
19 his every day work, that's not expert testimony. That is  
20 his factual account of what he works on every day.

21                  MR. FLANNERY: Your Honor, he's using terms like  
22 "future frames" which is a claim term. By the way --

23                  MR. KUBEHL: I didn't use future frames. I was  
24 using the term in the document.

25                  MR. FLANNERY: You -- you just said future.

1                   Your Honor, it's -- it's clearly getting into --  
2 it's expert testimony over and over and over again.  
3 They've got an expert who is here.

4                   THE COURT: Well, we discussed this at length in  
5 chambers, and as I told you there, this is a gentleman who  
6 probably has a high enough level of knowledge and  
7 understanding to be an expert, but he was not designated as  
8 an expert. And he's not going to testify as an expert  
9 witness would.

10                  Beyond a high level of the operation and  
11 functionality, which seems to have been covered, we're  
12 getting into a level of detail that involves concepts and  
13 applications that a fact witness is not typically able to  
14 explore.

15                  And I told you all in chambers there was a line up  
16 to which as a fact witness, not designated as an expert, he  
17 could go.

18                  And, quite honestly, I believe we've probably  
19 reached and crossed that line where if we go further, he's  
20 going to be giving the kind of conceptual description and  
21 analysis and innerworking with parts that are a detailed  
22 part of the operations.

23                  They give rise to language in the claims that have  
24 been construed. And it's highly problematic for him to get  
25 into the kind of level of granularity that only an expert

1 witness is qualified to do.

2 So we can continue this process, or Mr. Kubehl can  
3 decide, in light of that guidance, where he wants to go  
4 next.

5 You all control the questions and the objections.  
6 But I'm trying to give you some guidance.

7 MR. WARD: Your Honor, with respect to this  
8 witness, it's this -- it was brought up in chambers that  
9 he's asking questions that you told him are improper, and  
10 we have to continue objecting in front of the jury.

11 I know he's got technical knowledge, but they've  
12 got their technical expert coming up next to testify about  
13 all these concepts.

14 MR. KUBEHL: I disagree. We specifically talked  
15 in chambers. I specifically said this is exactly what we  
16 would be doing, and that I would not be comparing that to  
17 the claims, I wouldn't be using any language -- I'll use  
18 the terms in the documents that he uses every day. It's  
19 factual testimony about a system that he's designed.

20 MR. FLANNERY: Your Honor, continuing to go in  
21 this direction, we've already crossed the line, then we're  
22 trying -- keep going way over it.

23 THE COURT: Well, I think -- I think both sides  
24 can see from the rulings where I'm trying to draw the line.

25 And you need to conform your examination both on

1 direct and cross to where you see the Court drawing the  
2 line. You can differ with it later if you want to, but I  
3 think you've got a pretty good idea of what my decisions  
4 are.

5 MR. KUBEHL: I would -- I would propose that --  
6 I've asked him whether he made design decisions. He said  
7 he thought it was a bad thing. I will bring up one more  
8 document. I will ask him did -- did Ericsson memorialize  
9 those decisions in a document. I'll bring the document up,  
10 show it. I won't ask him any questions about it.

11 THE COURT: All right.

12 MR. KUBEHL: Okay.

13 THE COURT: Let's go.

14 (Bench conference concluded.)

15 THE COURT: Proceed.

16 Q. (By Mr. Kubehl) Mr. Skarby, with respect to the  
17 decision you said that you made that you thought that using  
18 future TTI allocations was a bad idea, what -- did Ericsson  
19 memorialize that in any document?

20 A. Yes, there was a report from the research department.

21 MR. KUBEHL: Could we have Exhibit 277?

22 Q. (By Mr. Kubehl) What are we looking at on 277? You  
23 don't have to give me any description of the contents of  
24 it, just what is the document?

25 A. This is the report I mentioned from the research

1 department.

2 Q. And what's the date of that report?

3 A. 27th of August 2007.

4 Q. Thank you.

5 MR. KUBEHL: That's Exhibit 277.

6 You can take that down, Mr. Patterson.

7 Q. (By Mr. Kubehl) I'd like to move to the operation of  
8 the downlink scheduler. Is the downlink scheduler  
9 something you personally worked on?

10 A. Yes.

11 Q. Do you have a personal understanding of how it works?

12 A. I have.

13 Q. Do you have an -- any understanding of the QoS aware  
14 scheduler?

15 A. I have.

16 Q. Is that something you've worked on?

17 A. Excuse me?

18 Q. Is that something you have personal knowledge of how it  
19 operates?

20 A. Yes, I have.

21 Q. The QoS aware scheduler, what type of QoS does that  
22 scheduler use?

23 A. Network side QoS set by the operator of the network.

24 Q. Who would the operator of the network be in this case?

25 A. That would be T-Mobile.

1 Q. Why would a network operator want to specify QoS?

2 MR. FLANNERY: Objection, Your Honor. Getting  
3 into expert testimony.

4 THE COURT: Calls for an opinion. Sustained.

5 Q. (By Mr. Kubehl) Did -- did Ericsson ever consider --  
6 or was Ericsson ever involved in any discussions where  
7 alternatives to using network QoS requirements were  
8 involved?

9 A. Yes.

10 Q. And what alternative was proposed?

11 MR. FLANNERY: Objection, Your Honor. Getting  
12 into expert testimony again.

13 THE COURT: Sustained.

14 Q. (By Mr. Kubehl) Why did Ericsson design its downlink  
15 scheduler to use network QoS requirements?

16 MR. FLANNERY: Objection, Your Honor. Getting  
17 into expert testimony again.

18 THE COURT: Sustained.

19 MR. KUBEHL: May I put the first exhibit back  
20 up -- the demonstrative back on the easel?

21 THE COURT: The one you used earlier?

22 MR. KUBEHL: Yes, sir.

23 THE COURT: Certainly.

24 Q. (By Mr. Kubehl) Mr. Skarby, I just wanted to ask you  
25 some questions about the sort of tube that you draw. We

1 never really got there. Can you -- let me give you a  
2 concise question.

3 First of all, what's shown on the far left of your  
4 diagram -- the far -- far right of your diagram?

5 A. On the right, there is this cloud thing that's supposed  
6 to represent the Internet, and in there are two servers  
7 drawn -- Facebook and YouTube, for examples.

8 Q. Okay. And then what are the red blocks there?

9 A. They represent packets or data flowing from the servers  
10 that this terminal wants to display on its screen.

11 Q. What is the tunnel looking thing that they're going  
12 into?

13 A. That is called an E-RAB for radio access bearer.

14 Q. And what -- what's that?

15 MR. FLANNERY: Objection, Your Honor. Getting  
16 into expert testimony again.

17 THE COURT: He can certainly describe what it is.

18 How it operates is a different matter. Overruled.

19 A. So that is like a logical tunnel through which  
20 information flows from the operator's core network to the  
21 mobile phone.

22 Q. (By Mr. Kubehl) You show packets coming out of the  
23 Facebook server and packets coming out of the YouTube. Are  
24 they going into the same tunnel?

25 A. Yes.

1 Q. When the Ericsson downlink scheduler -- when the  
2 packets go through the tunnel and they get to the Ericsson  
3 downlink scheduler, what's the downlink -- downlink  
4 scheduler do with them?

5 MR. FLANNERY: Objection, Your Honor, expert  
6 testimony.

7 THE COURT: Let me hear the answer. I mean, to  
8 the extent he says it schedules them, that's okay. To the  
9 extent he begins to describe how the scheduling all works  
10 and how it interacts with everything else, he's become an  
11 expert witness which the Defendants did not designate him  
12 as an expert witness in this case. It depends on the  
13 answer.

14 So, Mr. Skarby, if you will, answer the question  
15 for me.

16 A. When they arrive in the -- you know, the easel -- that  
17 the downlink scheduler becomes aware of them, you can say  
18 the competition starts and begins to schedule them.

19 MR. FLANNERY: Your Honor --

20 THE COURT: That's overruled. That's -- that's a  
21 permissible answer.

22 Next question, Mr. Kubehl.

23 Q. (By Mr. Kubehl) And with respect to the QoS aware  
24 scheduler that you talked about, does the QoS aware  
25 scheduler see the QoS associated with the individual

1 packets from YouTube and Facebook?

2 A. No, it doesn't.

3 Q. Why not?

4 A. The system is not --

5 MR. FLANNERY: Objection, Your Honor. It calls  
6 for expert testimony.

7 THE COURT: Sustained.

8 MR. KUBEHL: Okay. We'll put this up.

9 THE COURT: If you're through with it, you may  
10 take it down.

11 MR. KUBEHL: May I replace the easel?

12 THE COURT: If you're through using it, that'd be  
13 fine.

14 Q. (By Mr. Kubehl) Mr. Skarby, you're -- you've flown  
15 from Sweden to be here because of this lawsuit?

16 A. Well, to be correct, I flew from Australia --  
17 Australia, sorry.

18 Q. To be here for this lawsuit?

19 A. I did, yes.

20 Q. Does Ericsson take this lawsuit seriously?

21 A. Yes.

22 Q. When Ericsson was sued for patent infringement in this  
23 case, what did it do?

24 A. Sorry, again?

25 Q. What did Ericsson do when it was sued by IV for patent

1 infringement?

2 A. I was contacted about this lawsuit in the fall of 2017,  
3 and then I grabbed the patent, I refreshed my knowledge of  
4 how the product worked, I contacted some of my colleagues  
5 to make sure I understood it, compared my knowledge to --  
6 of the product with the patent claims, and I had two days  
7 of depositions with Intellectual Ventures's legal team,  
8 and --

9 THE COURT: Mr. Skarby, the question was: What  
10 did Ericsson do? Not what did you do personally. Do you  
11 know what the company did when the lawsuit was filed  
12 against them? You're not here as the representative of the  
13 company, are you?

14 He's not the corporate rep?

15 MR. KUBEHL: He's not corporate rep.

16 THE COURT: He can't speak for the corporation.

17 You've already had the corporate representative testify.

18 Q. (By Mr. Kubehl) Mr. Skarby, do you know why Ericsson  
19 turned to you to look at these patents?

20 MR. FLANNERY: Objection, Your Honor. As he  
21 indicated, he's not the corporate representative, and he's  
22 about to --

23 THE COURT: He can't testify as to the thought  
24 processes of the client or the parent, Ericsson. Their  
25 representative is here, and he can speak to what the

1 company's thought processes were, but not this fact  
2 witness.

3 MR. KUBEHL: Okay.

4 THE COURT: Over -- sustained.

5 Q. (By Mr. Kubehl) What was your understanding of why you  
6 were being asked to look at the patents?

7 MR. FLANNERY: Objection, Your Honor. It's the  
8 same thing.

9 THE COURT: Same ruling. Sustained.

10 Q. (By Mr. Kubehl) After looking at the patents and  
11 comparing them to the Ericsson products, did you think that  
12 Ericsson infringed?

13 MR. FLANNERY: Same objection, Your Honor.

14 THE COURT: Sustained.

15 MR. KUBEHL: Your Honor, this is -- this goes  
16 to --

17 THE COURT: This -- this witness is not going to  
18 testify about an ultimate conclusion on infringement. He's  
19 not an expert on infringement. He's not been named as an  
20 expert witness.

21 If you want to elicit testimony about the state of  
22 the mind of Ericsson, you're going to have to do it through  
23 the corporate representative, who is entitled to speak for  
24 the company.

25 MR. KUBEHL: Yes, Your Honor.

1 Q. (By Mr. Kubehl) Mr. Skarby, are you proud to work at  
2 Ericsson?

3 A. Yes.

4 Q. Are you proud of the work your team has done in putting  
5 together this scheduling functionality?

6 A. I'm very proud of it. They have to go against the  
7 stream in many cases, and we managed to beat the  
8 competition with our new ideas.

9 MR. KUBEHL: That's all I have. Pass the witness.

10 THE COURT: Cross-examination.

11 MR. FLANNERY: Your Honor, may I approach?

12 THE COURT: You may approach.

13 (Bench conference.)

14 MR. FLANNERY: Your Honor, I'm not going to have  
15 any cross-examination, but I think as a matter of fairness,  
16 we request --

17 THE COURT: Speak up just a little bit.

18 MR. FLANNERY: I'm sorry. I'm not going to have  
19 any cross-examination, but as a matter of fairness, we  
20 request that the Court instruct the jury about the  
21 requirements that have to be made for an expert disclosure.

22 THE COURT: I think the comments the Court's made  
23 through the course of the direct examination and your  
24 objections has been informative on that issue. I think to  
25 go further would be more than is necessary. So that

1 request is overruled.

2 MR. FLANNERY: Thank you, Your Honor.

3 MR. WARD: Thank you, Your Honor.

4 (Bench conference concluded.)

5 THE COURT: Does Plaintiff have cross-examination  
6 of this witness?

7 MR. FLANNERY: No, no cross-examination, Your  
8 Honor.

9 THE COURT: All right. Then you may step down,  
10 Mr. Skarby.

11 THE WITNESS: Thank you.

12 MR. KUBEHL: May the witness be excused?

13 THE COURT: Any objection? Mr. Flannery, any  
14 objection?

15 MR. FLANNERY: No objection.

16 THE COURT: All right. Mr. Skarby, you're  
17 excused, which means you're free to stay. You're also free  
18 to leave, sir.

19 THE WITNESS: Thank you.

20 THE COURT: You're quite welcome.

21 Ladies and gentlemen, before we hear from the next  
22 Defendants' witness, we're going to recess for lunch.

23 If you will take your notebooks with you to the  
24 jury room, lunch should be there waiting for you.

25 Follow all the instructions I've given you,

1 including, of course, not to discuss the case among  
2 yourselves.

3 It's a quarter until noon, according to the clock  
4 I have. We'll do our best to reconvene at 12:30. The jury  
5 is excused for lunch at this time.

6 COURT SECURITY OFFICER: All rise.

7 (Jury out.)

8 THE COURT: Counsel, I trust there are dedicated  
9 and brilliant attorneys somewhere working on the jointly  
10 revised charge and verdict form that I instructed you on  
11 yesterday, and I will have it by 5:00 o'clock?

12 MS. HENRY: Yes, Your Honor.

13 MS. SMITH: Yes, Your Honor.

14 THE COURT: All right. We stand in recess for  
15 lunch.

16 COURT SECURITY OFFICER: All rise.

17 (Recess.)

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## CERTIFICATION

3 I HEREBY CERTIFY that the foregoing is a true and  
4 correct transcript from the stenographic notes of the  
5 proceedings in the above-entitled matter to the best of my  
6 ability.

9       /S/ Shelly Holmes  
10      SHELLY HOLMES, CSR, TCRR  
11      OFFICIAL REPORTER  
12      State of Texas No.: 7804  
13      Expiration Date: 12/31/20

2/6/19  
Date